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ALBERTA OIL SANDS

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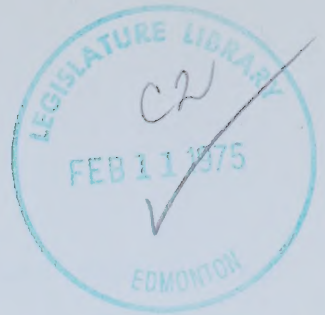
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E R R A T A

ALBERTA OIL SANDS
FACTS AND FIGURES
DECEMBER, 1974



This booklet contains changes to certain of the figures and tables contained in the original report tabled in the Legislature on June 4, 1974 by Hon. Bill Dickie.

The major revision was made to Table 1 (page 3-3) and Figure 5 (page 3-5) and involved acreage figures for the Cold Lake and Wabasca deposits which were changed from 3,160,000 to 2,636,000 acres and from 1,764,000 to 1,242,000 acres, respectively.

The Cold Lake and Wabasca deposits each contain several layers of oil sand at different depths, and the sum of the areas of the layers was inadvertently used which gave an inflated acreage total. This has been corrected by eliminating overlap acreage and the figures now represent the maximum areal extent of the combined layers.

FOREWORD

ALBERTA OIL SANDS

FACTS AND FIGURES

MAY 1974

G. B. Patton, P. Eng.

Deputy Minister

Alberta Mines and Minerals

Edmonton, Alberta

DEPARTMENT OF MINES AND MINERALS

Petroleum Plaza, South Tower

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F O R E W O R D

The Alberta Oil Sands constitute the largest known reserves of petroleum in the world, containing approximately 900 billion barrels of heavy oil in place. Recent events affecting world petroleum supplies have generated new interest in the Alberta Oil Sands, and we may expect that efforts will be accelerated to improve existing processes and develop new technology for extracting and upgrading these huge deposits.

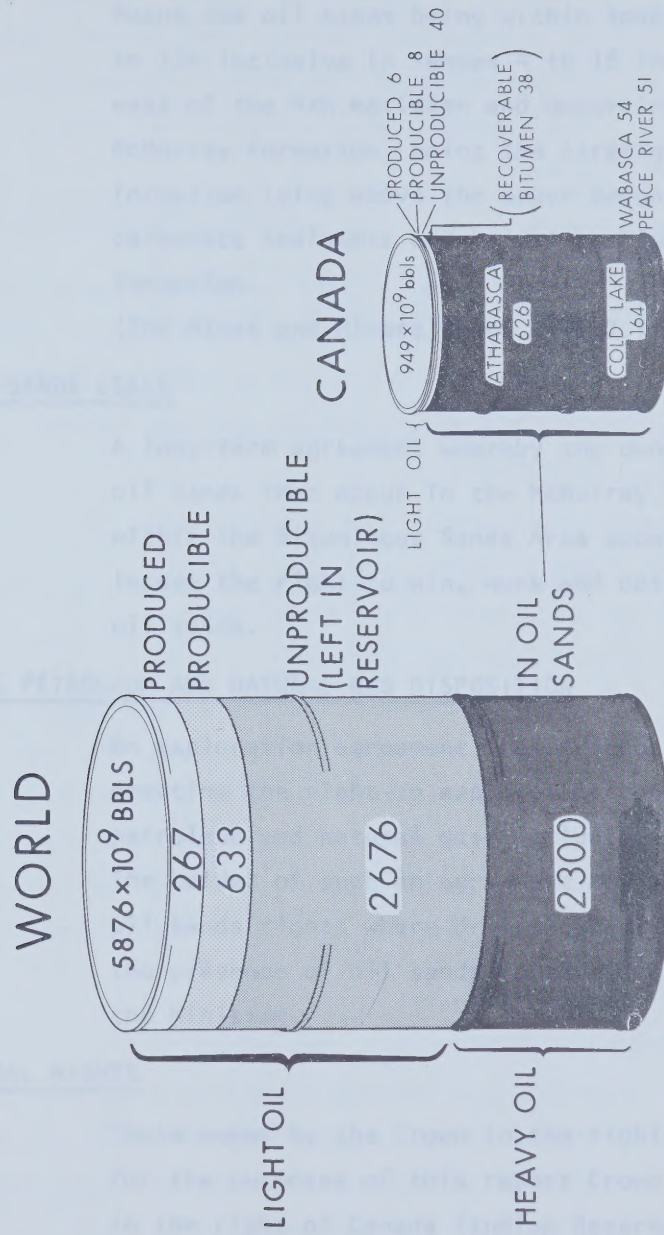
In keeping with the current interest in oil sands development, Alberta Mines and Minerals has prepared this report which summarizes facts and figures dealing with the current status of the disposition of Crown mineral rights in the major oil sands areas of Alberta. In this connection, it must be recognized that oil and bituminous sands land holdings of individual companies change from time to time, and these changes will affect the data presented here. Nevertheless, the overall picture of land holdings as they exist at this time should be useful to those interested or involved in the development of the Alberta Oil Sands.

G. B. Mellon, P. Geol.
Deputy Minister
Alberta Mines and Minerals
Edmonton, Alberta

May 31, 1974

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DISCOVERED PETROLEUM RESOURCES



TERMINOLOGY

BITUMINOUS SANDS

Means the oil sands being within townships 84 to 104 inclusive in ranges 4 to 18 inclusive, west of the 4th meridian and occurring in the McMurray Formation, being the stratigraphic formation lying above the upper Devonian carbonate sediments and below the Clearwater formation.

(The Mines and Minerals Act 2.(1)2.)

BITUMINOUS SANDS LEASE

A long-term agreement whereby the owner of the oil sands that occur in the McMurray Formation within the Bituminous Sands Area accords the lessee the right to win, work and obtain these oil sands.

CONVERTIBLE PETROLEUM AND NATURAL GAS DISPOSITION

An exploration agreement (reservation or permit) granting the right to explore for conventional petroleum and natural gas, including oil sands. The holder of such an agreement may apply for oil sands rights where drilling has established the presence of oil sands to the satisfaction of the Minister.

CROWN MINERAL RIGHTS

Those owned by the Crown in the right of Alberta. For the purposes of this report Crown minerals in the right of Canada (Indian Reserves, etc.,) are included in the freehold mineral rights category.

Terminology (Contd.)

CRUDE BITUMEN

A naturally occurring viscous mixture mainly of hydrocarbons heavier than pentane which, in its naturally occurring viscous state, is not recoverable at a commercial rate through a well.

FREEHOLD MINERAL RIGHTS

Those mineral rights owned by a party other than the Crown in right of Alberta. These include mineral rights granted to private citizens and companies and the Federal Government.

IN PLACE RESERVES

Defined as the total raw bitumen in a deposit.

IN SITU AREAS

Those portions of the bituminous and oil sands deposits overlain by more than 500 feet of overburden. Such deposits are too deep to mine by surface mining methods and therefore require production by special drilling and "flushing" methods designed to reduce the viscosity of the heavy oil.

OIL SANDS

Means sand and other rock materials which contain crude bitumen and includes all other mineral substances in association therewith. (The Mines and Minerals Act 2.(1)20.)

The highly viscous crude hydrocarbon material in oil sands is not recoverable in its natural state through a well by ordinary production methods.

Terminology (Contd.)

OIL SANDS LEASE

A long-term agreement whereby the owner of the oil sands accords the lessee the right to win, work and obtain oil sands that are known to exist in designated zones within the location.

OIL SANDS PROSPECTING PERMIT

A short-term agreement granting the holder the right to explore for oil sands.

SURFACE MINEABLE AREA

That part of the Bituminous Sands Area overlain by 150 feet or less of overburden. The depth of overburden limiting surface mining operations today is based on recovery economics and technology that may reasonably be anticipated in the near future.

SYNTHETIC CRUDE OIL

The upgraded product obtained from crude bitumen. It is defined as a mixture, mainly of pentanes and heavier hydrocarbons, that may contain sulphur compounds, that is derived from crude bitumen and that is liquid at the conditions under which its volume is measured or estimated, and includes all other hydrocarbon mixtures so derived.

(The Oil and Gas Conservation Act 2.(1)41.)

UNDISPOSED CROWN

In this report, means Crown mineral rights that are not held under a petroleum and natural gas, oil sands or bituminous sands agreement.

TABLE OF CONTENTS

<u>Section</u>		<u>Page</u>
	Foreword	i
	Discovered Petroleum Resources	ii
	Terminology	iii
1	Introduction	1 - 1
2	Location of Deposits	2
3	General Statistics	
	Reserves of Crude Bitumen	3 - 1
	Land Disposition	3 - 3
	Revenue	3 - 9
4	Deposit Statistics	
	Athabasca	4 - 1
	Cold Lake	4 - 13
	Wabasca	4 - 18
	Peace River	4 - 22
5	Appendix "A"	
	Specimen Documents of Oil Sands Lease, Bituminous Sands Lease and Oil Sands Prospecting Permit Agreements	A - 1
	Oil Sands Regulations and Amendments Bituminous Sands Regulations and Amendments	A - 2

L I S T O F F I G U R E S

<u>Figure</u>	<u>Page</u>
1. Map of Alberta Showing the Location of the Four Major Oil Sands Deposits	2
2. Histogram Showing Reserves of Crude Bitumen In Place in the Athabasca, Cold Lake, Wabasca and Peace River Oil Sands Deposits	3 - 1
3. Histogram Showing Reserves of Crude Bitumen In Place Attributable to Surface Mining, Uncertain and In Situ Extraction Methods	3 - 2
4. Histogram Showing Comparative Area of Land in Each Major Oil Sands Deposit by Probable Method of Development	3 - 4
5. Pie Diagrams Comparing Crown and Freehold Land Disposition in the Athabasca, Cold Lake, Wabasca and Peace River Oil Sands Deposits	3 - 5
6. Histogram Showing Comparative Crown Lease Holdings by Major, Independent and Intermediate Size Companies in the Alberta Oil Sands	3 - 6
7. Histogram Showing Comparative Crown Lease Holdings by Individual Companies in the Alberta Oil Sands	3 - 7
8. Histogram Showing Number of Oil Sands and Bituminous Sands Leases Expiring Each Year for the Next 20 Years	3 - 8
9. Histogram Showing Comparative Alberta Government Revenue Derived from Bonuses from Sales, Fees and Rentals and Royalties from Alberta Oil Sands	3 - 9
10. Map Showing Land Disposition in the Evaluated Area of the Athabasca Deposit	4 - 1
11. Histogram Showing Comparative Crown Lease Holdings of Individual Companies in the Athabasca Deposit	4 - 2
12. Histogram Showing Comparative Acreage of Oil Sands and Bituminous Sands Rights Held by Private Companies (Crown Lease), the Alberta Government (Undisposed Crown) and Freehold Owners in the Athabasca Deposit	4 - 9

Figures (Contd.)

<u>Figure</u>		<u>Page</u>
13.	Map Showing Bituminous Sands Leases in the Surface Mineable Area of the Athabasca Deposit	4 - 10
14.	Histogram Showing Comparative Crown Lease Holdings of Individual Companies in the Surface Mineable Area of the Athabasca Deposit	4 - 11
15.	Map Showing Land Disposition in the Evaluated Area of the Cold Lake Deposits	4 - 13
16.	Histogram Showing Comparative Crown Lease Holdings of Individual Companies in the Cold Lake Deposits	4 - 14
17.	Histogram Showing Comparative Acreage of Oil Sands Rights Held by Private Companies (Crown Lease and Permit), the Alberta Government (Undisposed Crown) and Freehold Owners in the Cold Lake Deposits	4 - 17
18.	Map Showing Land Disposition in the Evaluated Area of the Wabasca Deposits	4 - 18
19.	Histogram Showing Comparative Crown Lease Holdings of Individual Companies in the Wabasca Deposits	4 - 19
20.	Histogram Showing Comparative Acreage of Oil Sands Rights Held by Private Companies (Crown Lease), the Alberta Government (Undisposed Crown) and Freehold Owners in the Wabasca Deposits	4 - 21
21.	Map Showing Land Disposition in the Evaluated Area of the Peace River Deposit	4 - 22
22.	Histogram Showing Comparative Crown Lease Holdings of Individual Companies in the Peace River Deposit	4 - 23
23.	Histogram Showing Comparative Acreage of Oil Sands Rights Held by Private Companies (Crown Lease and Permit), the Alberta Government (Undisposed Crown) and Freehold Owners in the Peace River Deposit	4 - 25

L I S T O F T A B L E S

<u>Table</u>		<u>Page</u>
1.	Summary of Land Disposition in Major Oil Sands Deposits	3 - 3
2.	Detailed Tabulation of Individual Company Crown Lease Holdings - Athabasca Deposit	4 - 3
3.	Summary of Land Disposition According to Method of Extraction - Athabasca Deposit	4 - 12
4.	Detailed Tabulation of Individual Company Crown Lease Holdings - Cold Lake Deposits	4 - 15
5.	Detailed Tabulation of Individual Company Crown Lease Holdings - Wabasca Deposits	4 - 20
6.	Detailed Tabulation of Individual Company Crown Lease Holdings - Peace River Deposit	4 - 24

SECTION 1

I N T R O D U C T I O N

The deposits discussed in this report have been variously referred to as *Tar Sands*, *Asphalt Sands*, *Bituminous Sands* and *Oil Sands*. The word *Tar* is the oldest term and refers to the pitch-like nature of the substance. Its earliest use, in all probability, was by the native people as a caulking, waterproofing substance. *Asphalt Sands* may have originated colloquially because of the resemblance of the natural material to road paving material.

The term *Bituminous Sand* was introduced by the early geologists and engineers of the Department of Mines and the Geological Survey of Canada and was carried over into the Alberta terminology when the mineral rights were transferred from Canada to Alberta in 1930; hence, the use of the term *Bituminous Sands* by the Alberta Department of Mines and Minerals. *Bitumen* is believed to be too general a term to describe these deposits as it is normally used to include all types of petroleum and near petroleum substances, solid, liquid and gaseous, including conventional crude oil. The hydrocarbon occurring in the Alberta deposits is a heavy, viscous crude oil, and it is preferable to refer to the deposits as *Oil Sands* because this terminology is in line with the current technology which results in the production of a synthetic *crude oil*.

The four major *Oil Sands* deposits in the province are Athabasca, Cold Lake, Wabasca and Peace River; in addition, several smaller deposits are found in northern Alberta. Much of the region underlain by *Oil Sands*

in the Athabasca area is classed as the *Bituminous Sands Area*, and the disposition of oil sands rights within this area comes under the Bituminous Sands Regulations. (Alberta Regulations 130/69, 394/68 and 342/62). Elsewhere, oil sands rights come under the Oil Sands Regulations. (Alberta Regulations 131/69, 395/68 and 378/62).

The distinction between *Bituminous Sands* and *Oil Sands* is arbitrary since both kinds of deposits contain essentially the same type of hydrocarbon. The *Bituminous Sands* of the Athabasca deposit are more shallow than the more deeply buried *Oil Sands* to the south and west, and contain all of the *Oil Sands* deposits accessible to surface mining techniques.

No *Bituminous Sands* leases have been issued since December, 1970. *Oil Sands* leases issue from petroleum and natural gas reservations and permits where oil sands are proven to exist; eight such leases have been issued since December, 1970.

SECTION 2

LOCATION OF ALBERTA'S OIL SANDS DEPOSITS

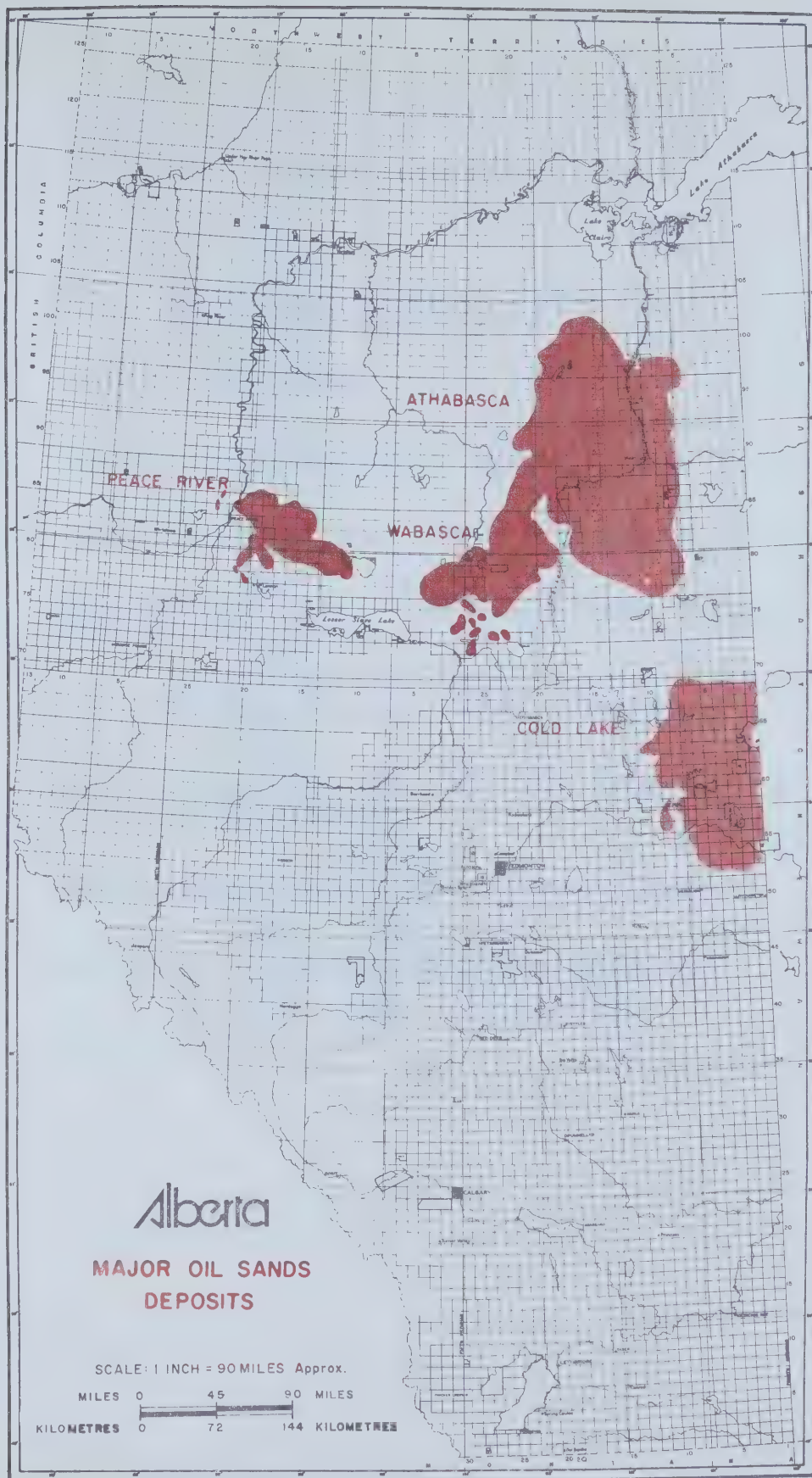


FIGURE 1: MAP OF ALBERTA SHOWING THE LOCATION OF THE FOUR MAJOR OIL SANDS DEPOSITS

SECTION 3

GENERAL STATISTICS

1. Reserves of Crude Bitumen
2. Reserves According to Extraction Method
3. Type of Land Disposition in Acres in Each Deposit
4. Comparative Area of Land in Each Deposit Showing Probable Method of Development
5. Type of Land Disposition by Percentage in Each Deposit
6. Comparative Crown Lease Holdings by Major, Independent and Intermediate Size Companies
7. Comparative Crown Lease Holdings by Individual Companies
8. Remaining Life of all Crown Leases under Initial Term
9. Alberta Government Revenue

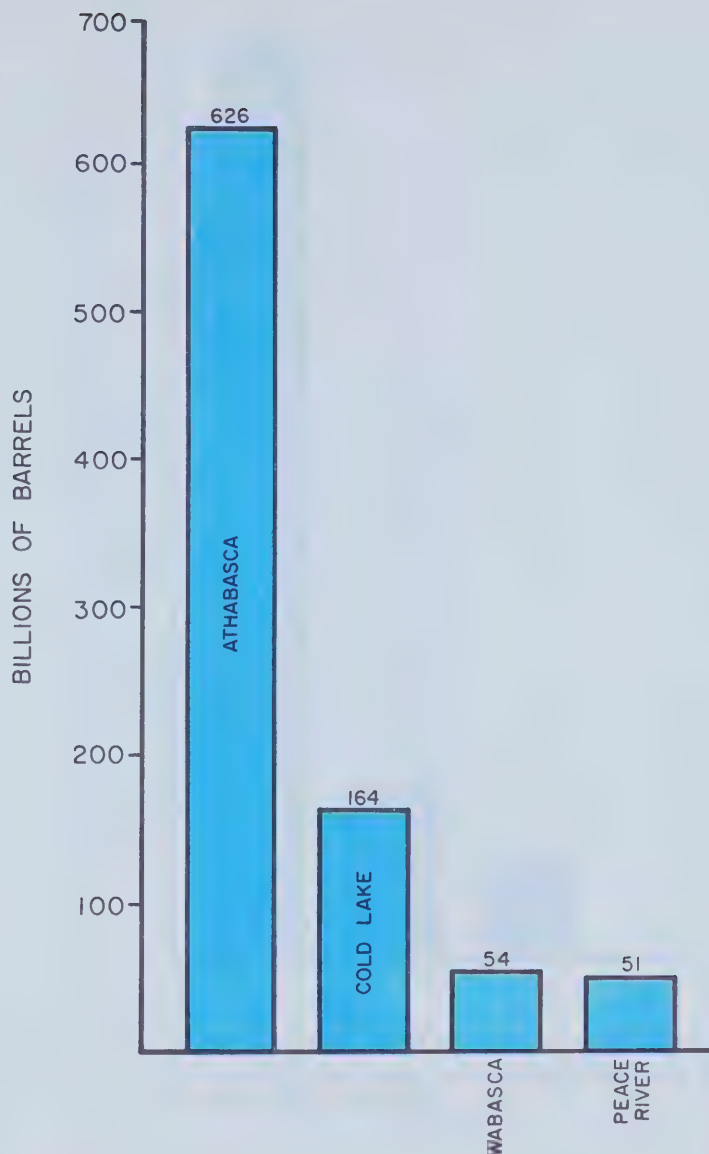


FIGURE 2: RESERVES OF CRUDE BITUMEN IN PLACE IN THE ATHABASCA, COLD LAKE, WABASCA AND PEACE RIVER OIL SANDS DEPOSITS

Comment: It is unlikely that more than one-third of the total bitumen in place will ever be recovered.

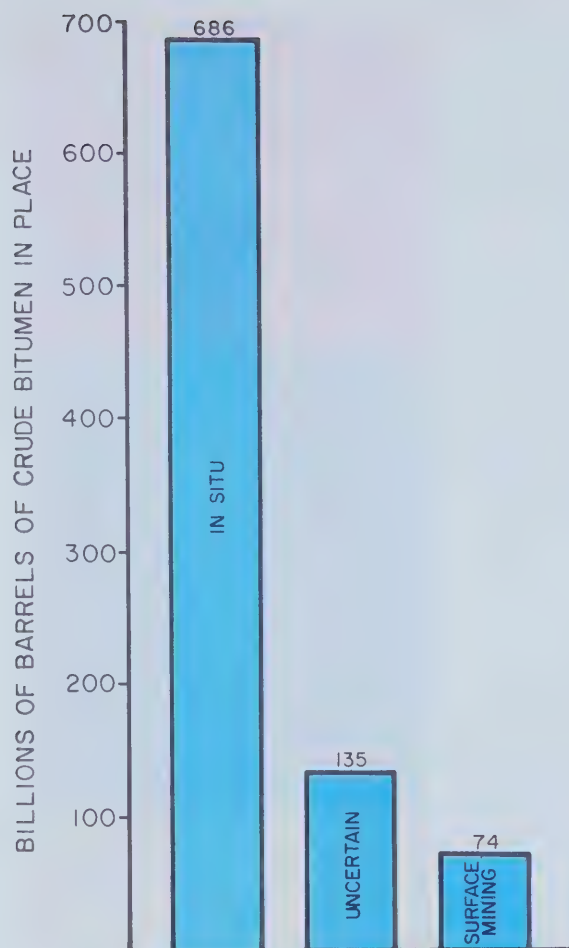


FIGURE 3: CRUDE BITUMEN RESERVES IN PLACE ATTRIBUTABLE TO SURFACE MINING, UNCERTAIN AND IN SITU EXTRACTION METHODS

Comment:

The potential surface mining reserves are found in oil sands covered by less than 150 feet of overburden.

The potential in situ reserves are found in oil sands covered by more than 500 feet of overburden.

Note that the extraction technique for the oil sands with more than 150 feet and less than 500 feet of overburden is uncertain at present.

TABLE I
SUMMARY OF LAND DISPOSITION IN MAJOR OIL SANDS DEPOSITS

OIL SANDS DEPOSIT	BITUMINOUS OR OIL SANDS LEASES (ACRES)	OIL SANDS PROSPECTING PERMITS (ACRES)	% OF TOTAL AREA	UNDISPOSED CROWN RIGHTS (ACRES)	% OF TOTAL AREA	CONVERTIBLE DISPOSITIONS (ACRES)	% OF TOTAL AREA	P. & N. G. LEASES (ACRES)	% OF TOTAL AREA	INDIAN RESERVE (ACRES)	FREEHOLD (ACRES)	% OF TOTAL AREA	TOTAL AREA (ACRES)
ATHABASCA	3,464,164		60 %	1,650,125	29 %	300,000	5 %	297,711	5 %	24,000	14,000	1 %	5,750,000
COLD LAKE	642,552	62,637	24 %	400,000	15 %	434,000	17 %	448,000	17 %	103,559	225,252	13 %	2,636,000
				Primrose Lake Air Weapons Range 320,000	12 %								
WABASCA	82,011		7 %	374,440	30 %	359,560	29 %	382,275	30 %	43,714		4 %	1,242,000
PEACE RIVER	192,328	51,080	17 % 4 %	350,440	30 %	341,712	29 %	227,700	19 %		16,740	1 %	1,180,000

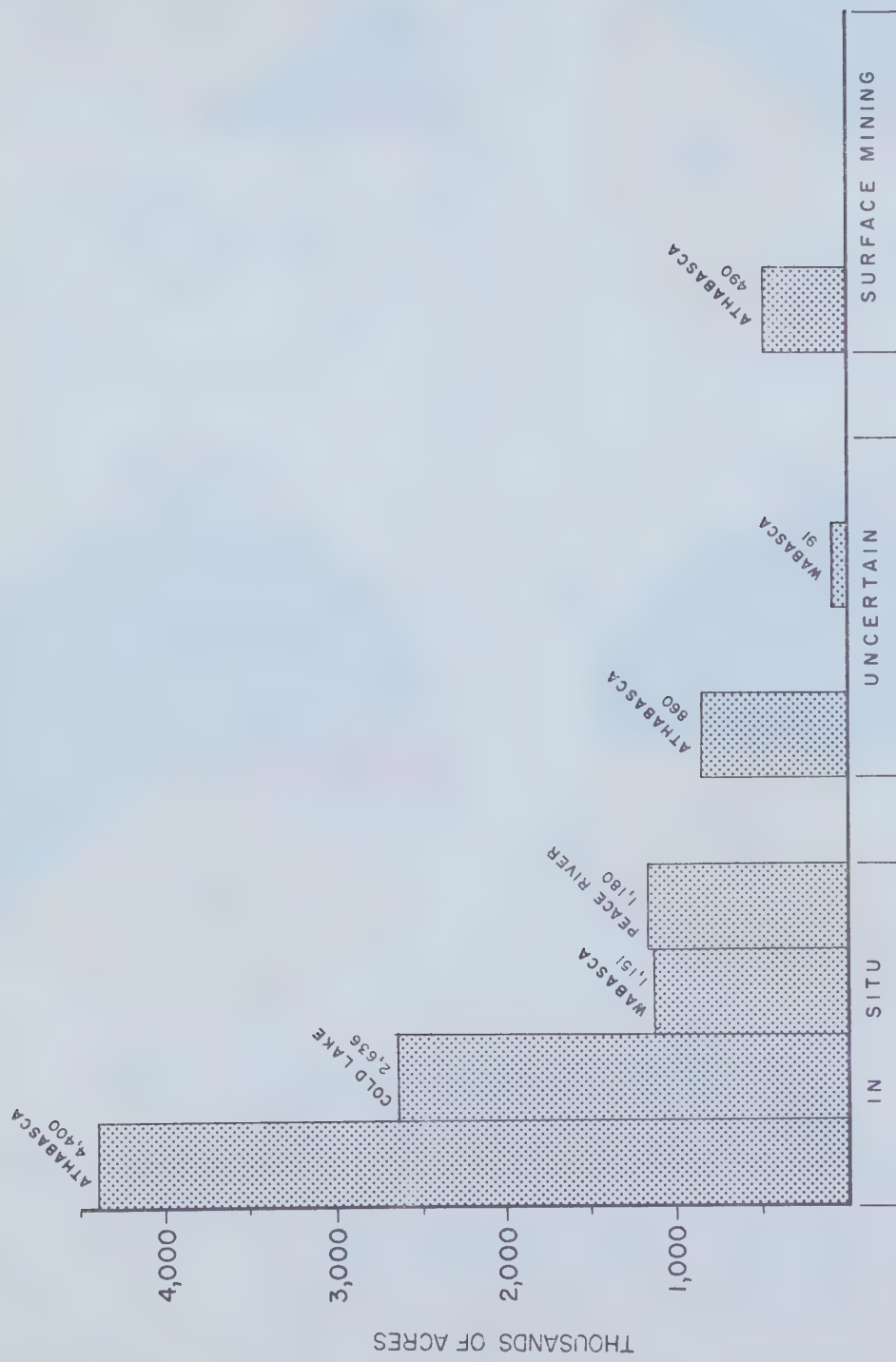


FIGURE 4: AREA OF LAND IN EACH DEPOSIT SHOWING PROBABLE METHOD OF DEVELOPMENT

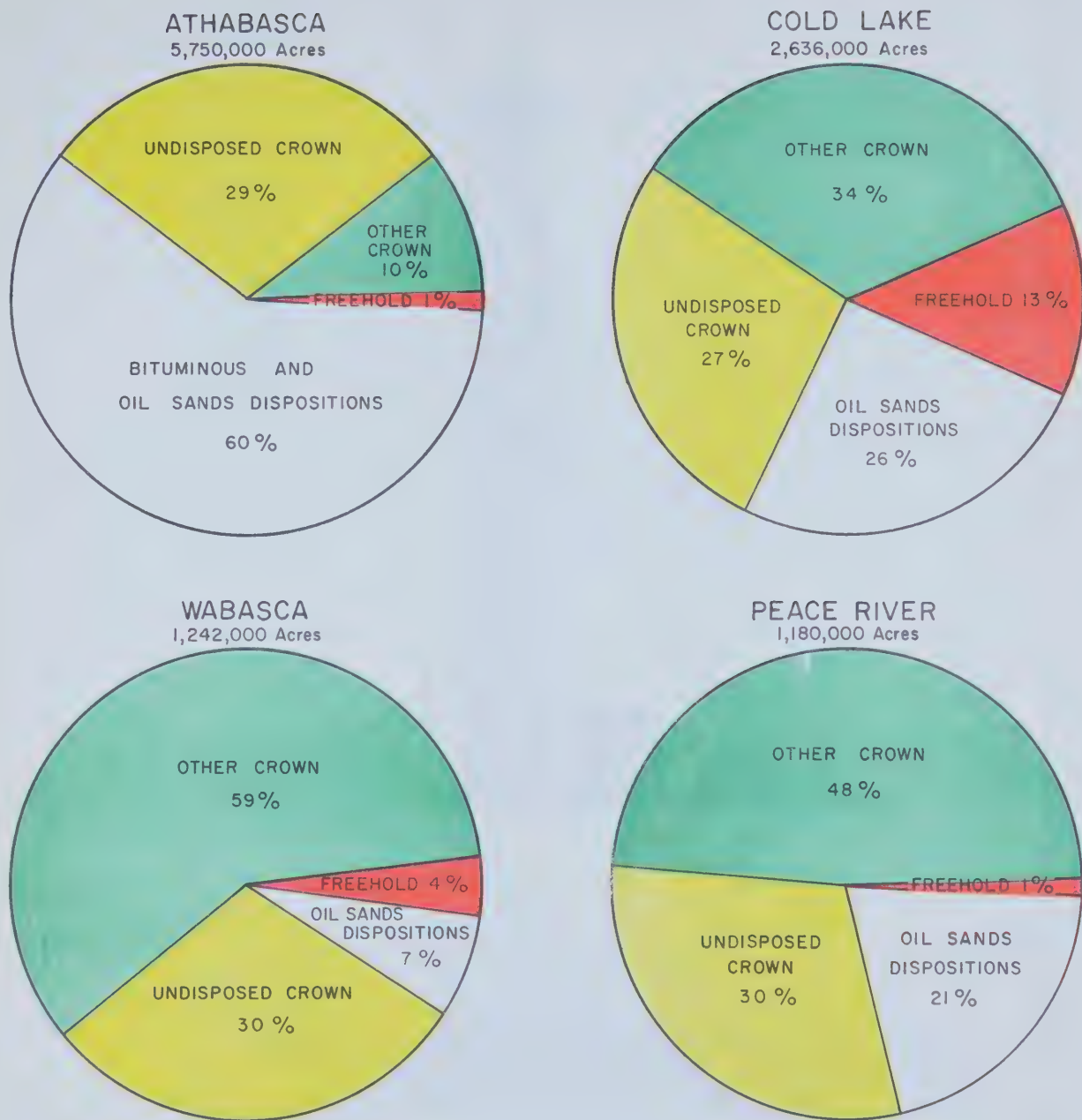


FIGURE 5: COMPARISON OF CROWN AND FREEHOLD LAND DISPOSITION IN THE ATHABASCA, COLD LAKE, WABASCA AND PEACE RIVER OIL SANDS DEPOSITS

Comment:

Oil sands dispositions are in the form of a lease or prospecting permit. Other Crown dispositions are petroleum and natural gas agreements, some of which are convertible to oil sands dispositions.

Undisposed Crown is land held by the Government of Alberta which can be posted for sale at some future time

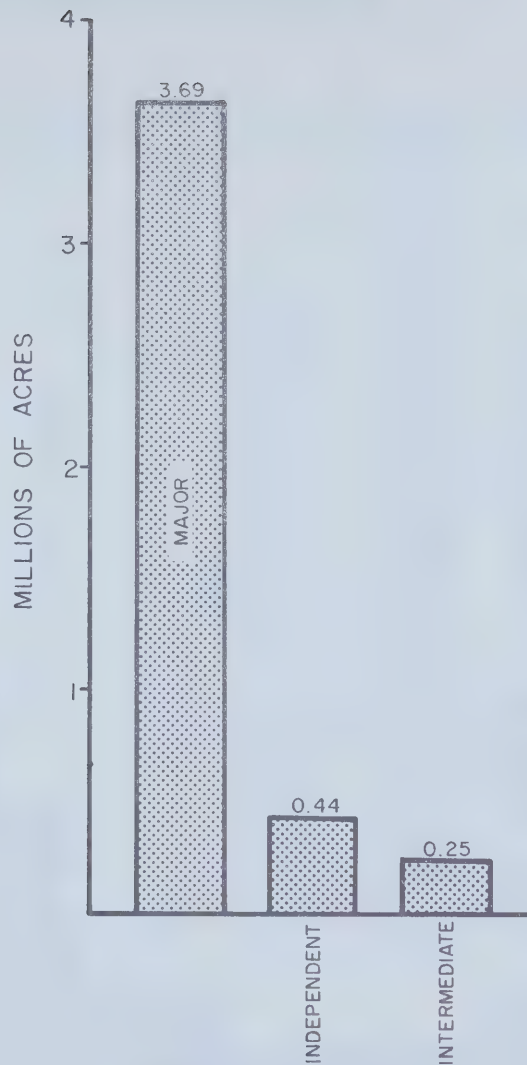


FIGURE 6: COMPARATIVE ACREAGE HELD UNDER CROWN LEASE BY MAJOR, INDEPENDENT AND INTERMEDIATE SIZE COMPANIES IN THE ALBERTA OIL SANDS

Comment: The vast amounts of capital and the technical expertise required to develop oil sands properties generally have been available only from major oil companies; hence, few of the smaller, independent companies have acquired oil sands leases.

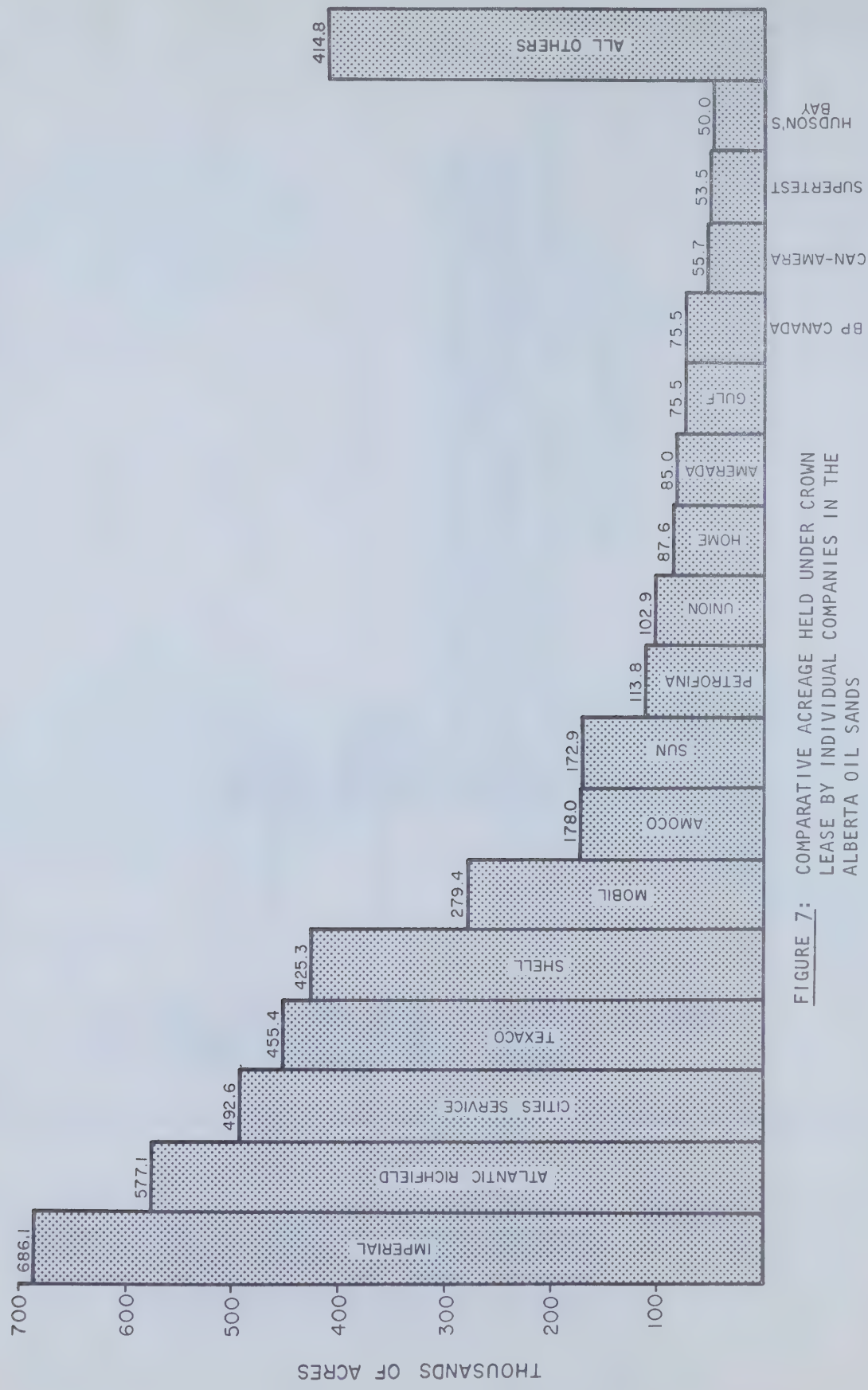


FIGURE 7: COMPARATIVE ACREAGE HELD UNDER CROWN LEASE BY INDIVIDUAL COMPANIES IN THE ALBERTA OIL SANDS

Comment: Most of the prime acreage was leased by the major oil companies in the late 1950's.



FIGURE 8:
NUMBER OF BITUMINOUS AND OIL SANDS LEASES
EXPIRING EACH YEAR FOR THE NEXT 20 YEARS

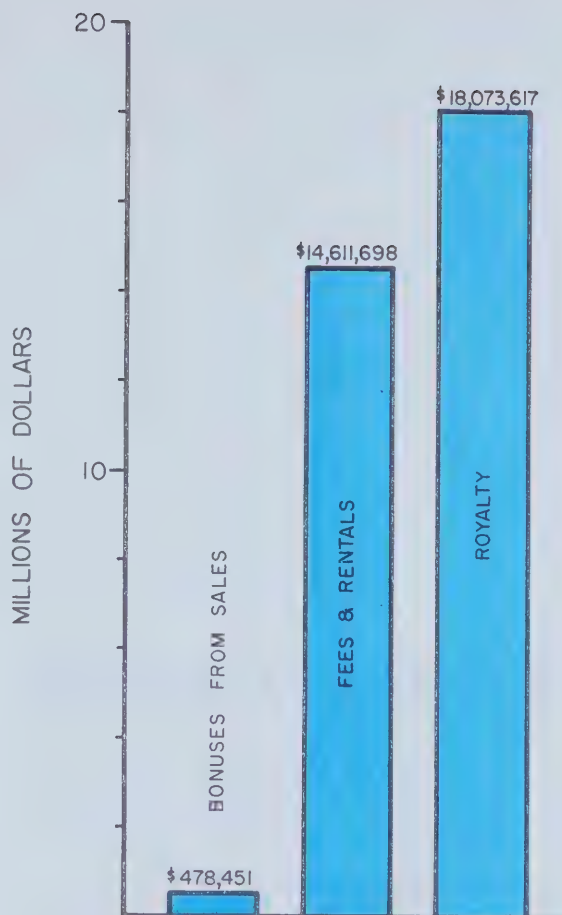


FIGURE 9: COMPARATIVE GOVERNMENT REVENUES DERIVED FROM BONUSES FROM SALES, FEES AND RENTALS AND ROYALTIES FROM THE ALBERTA OIL SANDS TO JANUARY 31, 1974

Comment: Bonuses shown are from sales of bituminous sands prospecting permits.

Lease rentals have been 25¢ per acre except for the Great Canadian Oil Sands Lease 86 which is \$1.00 per acre.

Royalties to date have been derived from Great Canadian Oil Sands Ltd. project on Lease 86.

SECTION 4

DEPOSIT STATISTICS

- I. Athabasca Deposit
- II. Cold Lake Deposits
- III. Wabasca Deposits
- IV. Peace River Deposit

I. THE ATHABASCA DEPOSIT

1. Map of Evaluated Area
2. Comparative Crown Lease Holdings by Individual Companies
3. Detailed Tabulation of Company Crown Lease Holdings
4. Comparative Land Holdings of Private, Crown and Freehold Mineral Rights
5. Surface Mineable Area Map
6. Comparative Crown Lease Holdings by Individual Companies in the Surface Mineable Area
7. Summary of Land Disposition According to Extraction Method

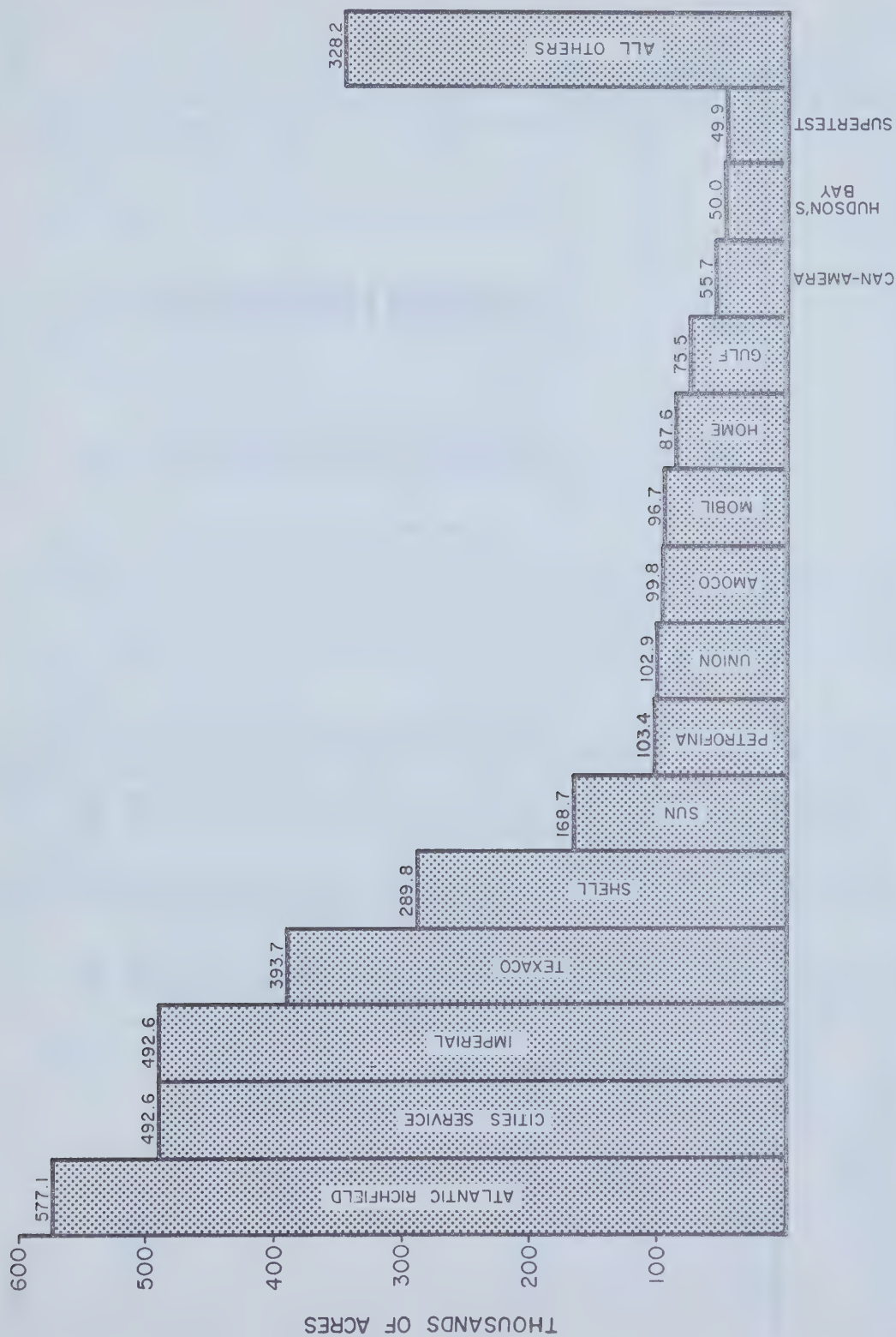


FIGURE 11: COMPARATIVE OIL AND BITUMINOUS SANDS ACREAGE
HELD UNDER CROWN LEASE BY INDIVIDUAL COMPANIES
IN THE ATHABASCA DEPOSIT

DISPOSITION OF OIL AND BITUMINOUS SANDS LEASES
IN THE ATHABASCA DEPOSIT

COMPANY	BITUMINOUS SANDS LEASES				OIL SANDS LEASES				TOTAL ACRES GROSS	TOTAL ACRES NET
	LEASE NO.	ACRES	INTEREST %	ISSUE/EXPIRY DATE	LEASE NO.	ACRES	INTEREST %	ISSUE/EXPIRY DATE		
AMERADA MINERALS CORPORATION OF CANADA LTD.	88	28,438	100	'67 '88						
	89	14,937	"	" "						
	90	2,916	"	" "						
	TOTAL	46,291							46,291	46,291
AMOCO CANADA PETROLEUM COMPANY LTD.	73	49,935	100	'61 '82						
	76	49,833	"	" "						
	TOTAL	99,768							99,768	99,768
AQUITAINE COMPANY OF CANADA LTD.	39	49,742	50	'60 '81						
		49,742							49,742	24,871
	TOTAL									
ATLANTIC RICHFIELD CANADA LTD.	17	49,788	30	'58 '79	2	49,403	25	'61 '82		
	22	49,591	"	'59 80	3	16,841	"	" "		
	29	49,722	"	" "	4	49,402	33 1/3	" "		
	31	49,870	"	" "	5	49,403	"	" "		
	32	11,365	"	" "	6	49,362	"	" "		
	40	22,054	"	" "	7	30,529	"	" "		
	41	18,491	"	'60 '81	8	19,457	"	" "		
	52	35,109	100	" "	9	49,411	"	" "		
	54	49,483	33 1/3	" "	10	27,257	"	" "		
	55	26,001	"	" "	11	7,768	"	" "		
	56	23,377	"	" "	12	20,123	"	" "		
	57	49,451	"	" "	13	11,666	"	" "		
	58	36,041	"	" "	14	39,010	"	" "		
	59	45,414	"	" "	15	41,610	"	" "		
	60	31,250	"	" "	16	49,435	"	" "		
	61	26,641	"	" "	17	15,544	"	" "		
	63	43,562	"	" "	18	46,802	"	" "		
	65	49,467	"	'61 '82	19	38,970	"	" "		
	66	49,419	"	" "						
	70	46,802	"	" "						
	71	36,492	"	" "						
	72	41,618	"	" "						
	74	23,353	100	" "						
	75	25,945	"	" "						
	78	36,086	30	" "						
	79	27,265	33 1/3	" "						
	81	41,954	"	'62 '83						
TOTAL		995,611				611,993			1,607,604	577,054
			378,577				198,477			

TABLE 2(Contd.)

COMPANY	BITUMINOUS SANDS LEASES					OIL SANDS LEASES					TOTAL ACRES GROSS	TOTAL ACRES NET
	LEASE NO.	ACRES	INTEREST %	ACRES	ISSUE/EXPIRY DATE	LEASE NO.	ACRES	INTEREST %	ACRES	ISSUE/EXPIRY DATE		
CANADA-CITIES SERVICE, LTD.		49,788	30	14,936	'58	'79	2	49,403	25	12,351	'61	'82
	22	49,591	"	14,877	'59	'80	3	16,841	"	4,210	"	"
	29	49,722	"	14,917	"	"	4	49,402	33 1/3	16,467	"	"
	31	49,870	"	14,961	"	"	5	49,403	"	16,468	"	"
	32	11,365	"	3,410	"	"	6	49,362	"	16,454	"	"
	40	22,054	"	6,616	"	"	7	30,529	"	10,176	"	"
	41	18,491	"	5,548	'60	'81	8	19,457	"	6,486	"	"
	54	49,483	33 1/3	16,494	"	"	9	49,411	"	16,470	"	"
	55	26,001	"	8,667	"	"	10	27,257	"	9,086	"	"
	56	23,377	"	7,792	"	"	11	7,768	"	2,589	"	"
	57	49,451	"	16,484	"	"	12	20,123	"	6,706	"	"
	58	36,041	"	12,014	"	"	13	11,666	"	3,889	"	"
	59	45,414	"	15,138	"	"	14	39,010	"	13,003	"	"
	60	31,250	"	10,417	"	"	15	41,610	"	13,870	"	"
	61	26,641	"	8,880	"	"	16	49,435	"	16,478	"	"
	63	43,562	"	14,521	"	"	17	15,544	"	5,181	"	"
	65	49,467	"	16,489	'61	'82	18	46,802	"	15,601	"	"
	66	49,419	"	16,473	"	"	19	38,970	"	12,990	"	"
	70	46,802	"	15,601	"	"						
	71	36,492	"	12,164	"	"						
	72	41,618	"	13,873	"	"						
	78	36,086	30	10,826	"	"						
	79	27,265	33 1/3	9,088	"	"						
	81	41,954	"	13,985	'62	'83						
	TOTAL	911,204		294,171				611,993		198,477	1,523,97	492,648
CANADIAN ASHLAND EXPLORATION LTD.	19	18,759	50	9,380	'58	'79						
	20	13,659	"	6,830	"	"						
	TOTAL	32,418		16,210							32,418	16,210
CANADIAN EXPORT GAS & OIL LTD.	15	2,094	100	2,094	'57	'78						
	TOTAL	2,094		2,094							2,094	2,094
CANADIAN RHOADES OIL LTD.	77	6,792	50	3,396	'61	'82						
	TOTAL	6,792		3,396							6,792	3,396

TABLE 2 (Contd.)

COMPANY	BITUMINOUS SANDS LEASES				OIL SANDS LEASES				TOTAL ACRES GROSS	TOTAL ACRES NET
	LEASE NO.	ACRES	%	INTEREST ACRES	ISSUE/EXPIRY DATE	LEASE NO.	ACRES	%	INTEREST ACRES	ISSUE/EXPIRY DATE
PACIFIC PETROLEUMS LTD. (BAILEY SELBURN OIL & GAS LTD.)	19	18,759	50	9,379	'58 '79					
	20	13,659	"	6,829	'60 '81					
	42	21,729	100	21,729	" "					
	TOTAL	54,147		37,937					54,147	37,937
PETROFINA CANADA LTD.	6	6,440	100	6,440	'55 '76					
	7	2,866	"	2,866	" "					
	8	1,393	"	1,393	'54 '75					
	9	5,601	"	5,601	'55 '76					
	11	2,483	"	2,483	" "					
	12	4,174	"	4,174	" "					
	33	22,701	"	22,701	'59 '80					
	34	9,129	"	9,129	" "					
	82	48,589	"	48,589	'62 '83					
	TOTAL	103,376		103,376					103,376	103,376
SHELL CANADA LIMITED	13	49,872	100	49,872	'56 '77	29	49,882	100	49,882	'65 '86
	26	23,506	"	23,506	'59 '80	30	10,532	"	10,532	" "
	28	40,642	"	40,642	" "					
	42-A	16,209	"	16,209	'60 '81					
	45	49,730	"	49,730	" "					
	53	49,418	"	49,418	" "					
	TOTAL	229,377	"	229,377			60,414		60,414	
STANDARD OIL COMPANY OF BRITISH COLUMBIA LIMITED	23	36,937	100	36,937	'59 '80					
	TOTAL	36,937		36,937					36,937	36,937
SUN OIL COMPANY	10	11,227	100	11,227	'55 '76					
	14	4,177	"	4,177	'56 '77					
	27	49,994	"	49,994	'59 '80					
	84	49,378	"	49,378	'64 '85					
	85	49,419	"	49,419	" "					
	86	4,522	"	4,522	'66 '87					
	TOTAL	168,717		168,717					168,717	168,717

TABLE 2(Contd.)

COMPANY	BITUMINOUS SANDS LEASES				OIL SANDS LEASES				TOTAL GROSS ACRES	TOTAL ACRES NET
	LEASE NO.	ACRES	%	INTEREST ACRES	ISSUE / EXPIRY DATE	LEASE NO.	ACRES	%	INTEREST ACRES	ISSUE / EXPIRY DATE
SUPERTEST INVESTMENT AND PETROLEUM LIMITED	24	49,941	100	49,941	'59 '80					
	TOTAL	49,941		49,941					49,941	49,941
TENNECO OIL & MINERALS, LTD.	87	49,427	100	49,427	'66 '87					
	TOTAL	49,927		49,927					49,927	49,927
TEXACO EXPLORATION CANADA LTD. (REGENT REFINING (CANADA) LIMITED)	44	49,775	100	49,775	'60 '81					
	46	49,751	"	49,751	" "					
	47	49,735	"	49,735	" "					
	48	49,763	"	49,763	" "					
	49	49,727	"	49,727	" "					
	51	49,503	"	49,503	" "					
	67	25,969	"	25,969	'61 '82					
	68	46,154	"	46,154	" "					
	69	23,377	"	23,377	" "					
	TOTAL	393,754		393,754					393,754	393,754
UNION OIL COMPANY OF CANADA LIMITED	25	49,964	100	49,964	'59 '80	2	49,403	25	12,351	61 '82
	91	36,382	"	36,382	'70 '91	3	16,841	"	4,210	" "
TOTAL		86,346		86,346			66,244		16,561	
									152,590	102,907
WOOD OIL COMPANY	77	6,792	50	3,396	'61 '82					
	TOTAL	6,792		3,396					6,792	3,396
ALL COMPANIES (INTEREST ACRES)				2,695,047					769,117	
										3,464,164

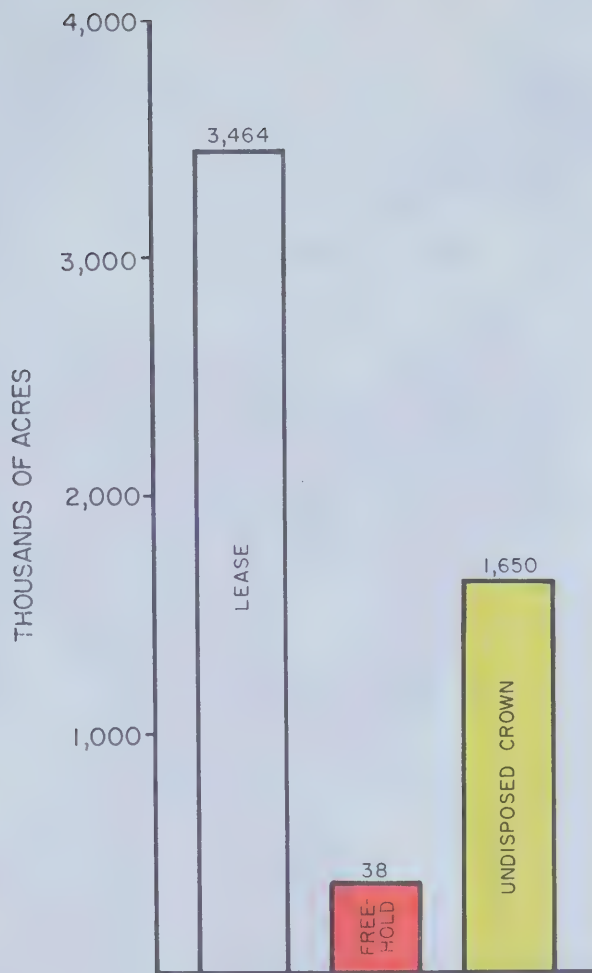
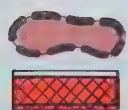
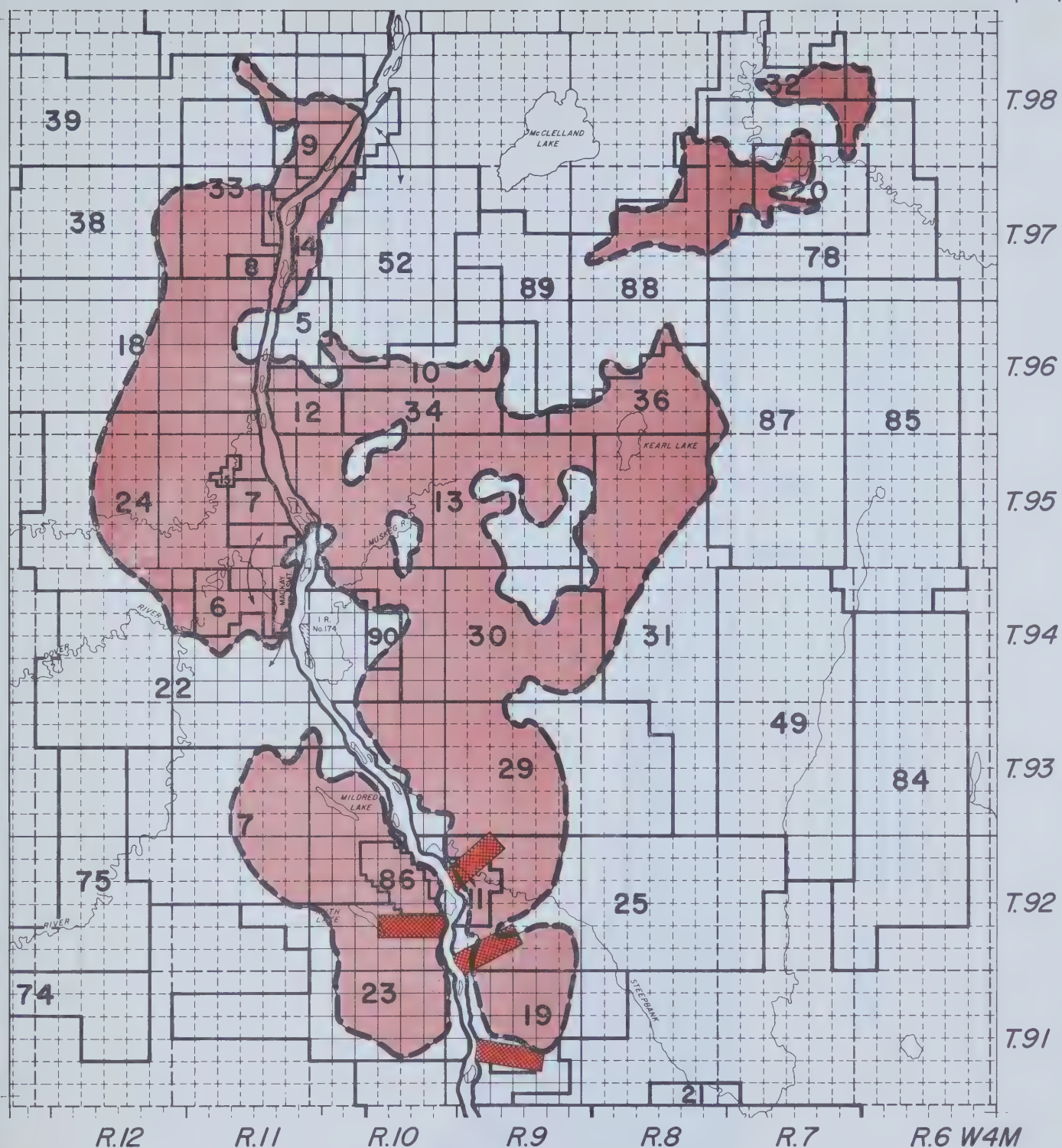


FIGURE 12: COMPARATIVE OIL AND BITUMINOUS SANDS ACREAGE HELD BY PRIVATE COMPANIES (CROWN LEASES), THE ALBERTA GOVERNMENT (UNDISPOSED CROWN) AND FREEHOLD OWNERS IN THE ATHABASCA DEPOSIT

COMMENT:

The Athabasca Deposit contains both bituminous sands leases and oil sands leases. Bituminous sands leases are confined to the Bituminous Sands Area as defined by The Mines and Minerals Act and include all the surface mineable leases.



MINEABLE AREA (by The Energy Resources Conservation Board 150')

FREEHOLD

FIGURE 13: BITUMINOUS SAND LEASES IN THE SURFACE MINEABLE AREA OF THE ATHABASCA DEPOSIT

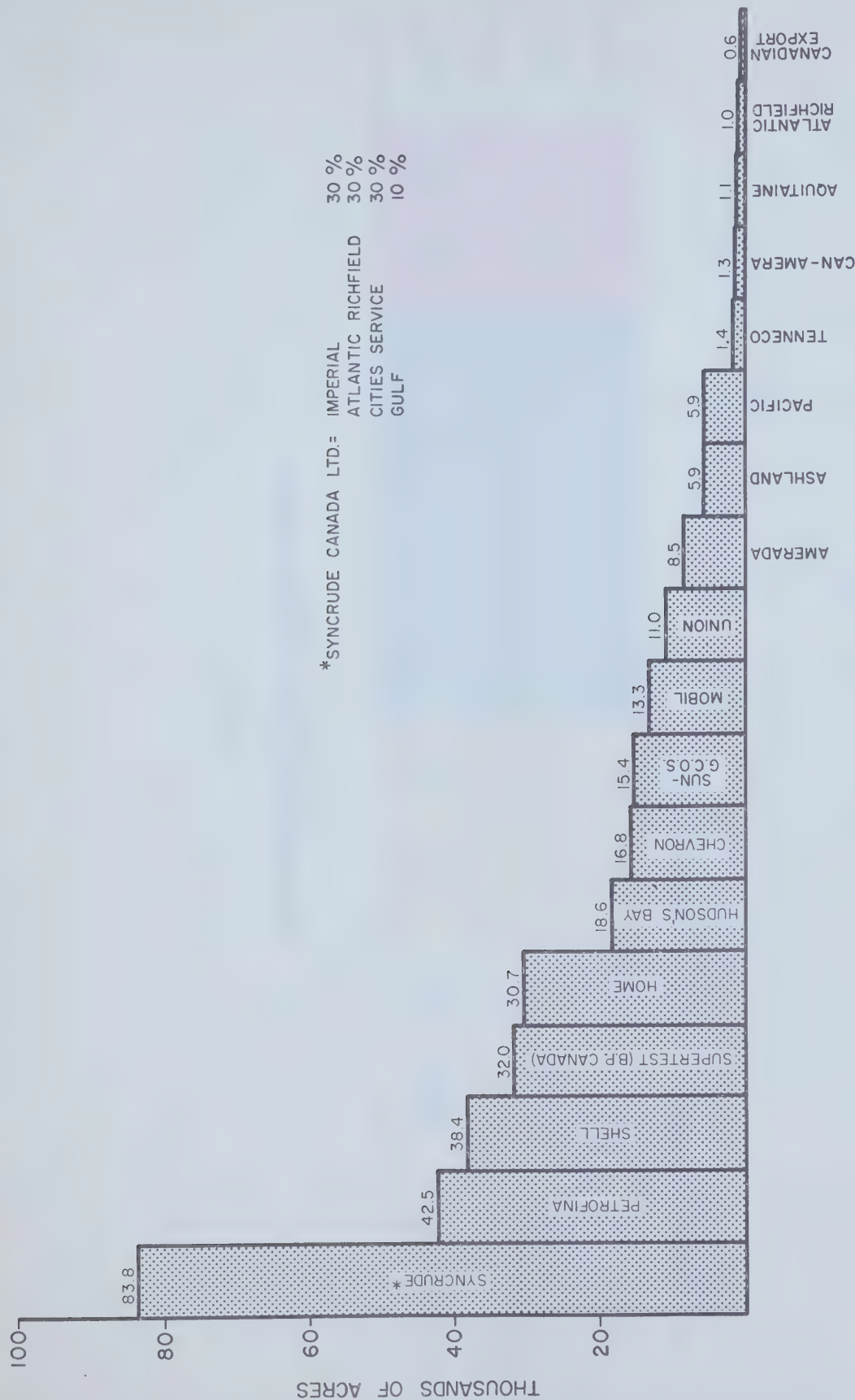


FIGURE 14: COMPARATIVE BITUMINOUS SANDS ACREAGE HELD UNDER CROWN LEASE BY INDIVIDUAL COMPANIES IN THE SURFACE MINEABLE AREA OF THE ATHABASCA DEPOSIT AS DEFINED BY THE ENERGY RESOURCES CONSERVATION BOARD

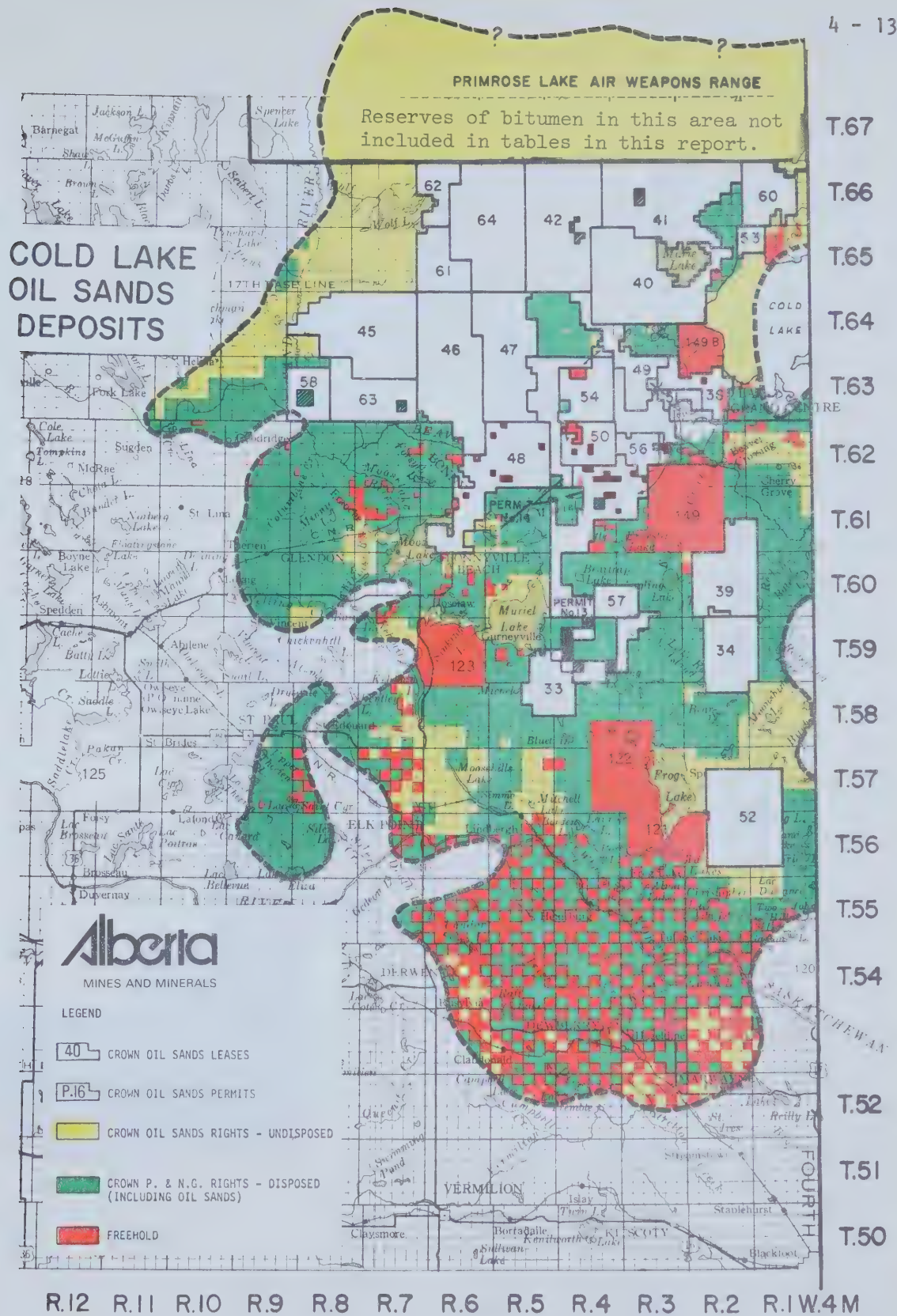
TABLE 3
LAND DISPOSITION BY METHOD OF EXTRACTION
IN ATHABASCA DEPOSIT

METHOD OF EXTRACTION	LEASED (ACRES)	% OF TOTAL AREA	UNDISPOSED CROWN (ACRES)	% OF TOTAL AREA	CONVERTIBLE TO LEASE (ACRES)	% OF TOTAL AREA	OTHER PANG. LEASES (ACRES)	% OF TOTAL AREA	FREEHOLD (ACRES)	% OF TOTAL AREA	TOTAL AREA (ACRES)
SURFACE MINEABLE* (Overburden < 150')	480,000	98 %							10,000	2 %	490,000
TECHNOLOGY UNCERTAIN (Overburden 150' - 500')	651,000	76 %	200,000	23 %					9,000	1 %	860,000
POTENTIAL IN-SITU (Overburden > 500')	2,333,164	53 %	1,450,125	33 %	300,000	7 %	297,711	6 %	19,000	1 %	4,400,000

*OIL SANDS SURFACE MINEABLE = 8.5 % OF ATHABASCA DEPOSIT
(Overburden < 150')
= 4 % OF TOTAL OIL SANDS IN ALBERTA

II. THE COLD LAKE DEPOSITS

1. Map of Evaluated Area
2. Comparative Crown Lease Holdings by Individual Companies
3. Detailed Tabulation of Company Crown Lease Holdings
4. Comparative Land Holdings of Private, Crown and Freehold Mineral Rights



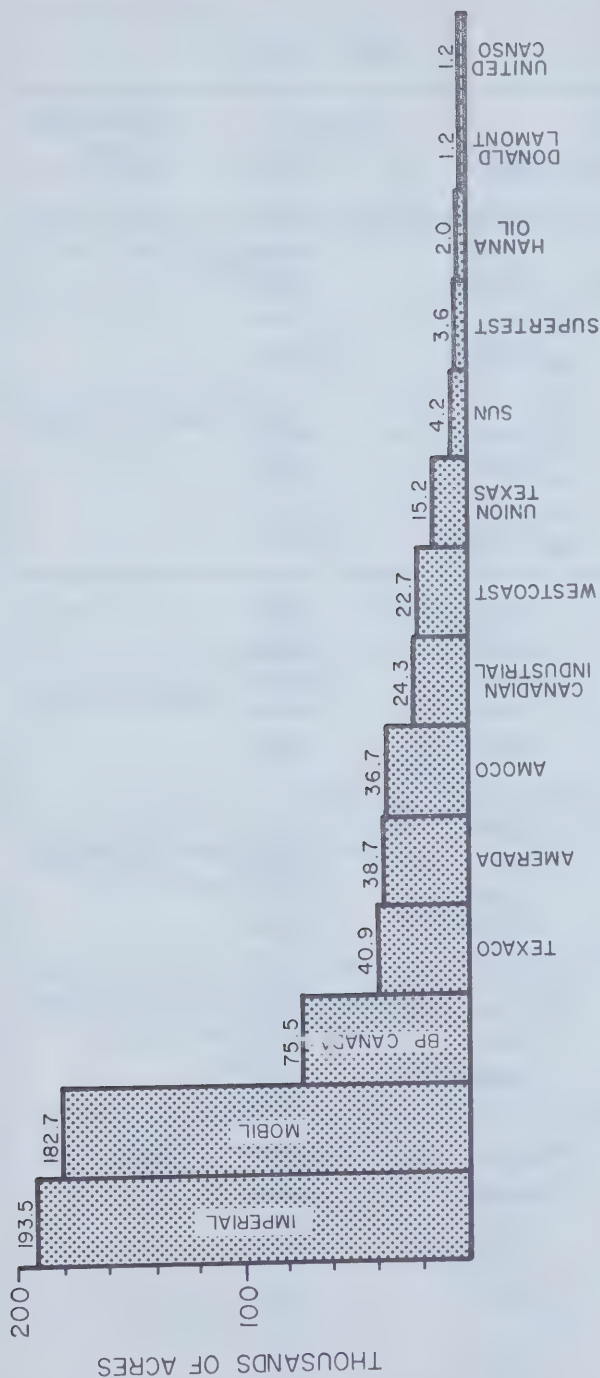


FIGURE 16: COMPARATIVE OIL SANDS ACREAGE HELD UNDER CROWN LEASE BY INDIVIDUAL COMPANIES IN THE COLD LAKE DEPOSITS

Comment: The Cold Lake deposits have somewhat less viscous oil than the other deposits and are believed by many to be the most favourable deposits for in situ development.

TABLE 4
DISPOSITION OF OIL SANDS LEASES
IN THE COLD LAKE DEPOSITS

COMPANY	OIL SANDS LEASES					
	LEASE NO.	ACRES	INTEREST %	ACRES	ISSUE/EXPIRY DATE	
AMERADA MINERALS CORPORATION OF CANADA LTD.	36	23,205	100	23,205	'67	'88
	50	11,016	"	11,016	'69	'90
	51	4,528	"	4,528	"	"
	TOTAL	38,749		38,749		
AMOCO CANADA PETROLEUM COMPANY LTD.	33	14,613	100	14,613	'67	'88
	34	22,089	"	22,089	"	"
	TOTAL	36,702		36,702		
BP CANADA LIMITED (BPOG OPERATIONS LTD.) (TRIAD OIL MANITOBA LTD.)	61	15,245	100	15,245	'71	'92
	62	10,848	"	10,848	"	"
	64	49,411	"	49,411	'72	'93
	TOTAL	75,504		75,504		
CANADIAN INDUSTRIAL GAS & OIL LTD.	54	15,885	50	7,943	'69	'90
	60	16,393	100	16,393	'71	'92
	TOTAL	32,278		24,336		
HANNA OIL DEVELOPMENT COMPANY	54	15,885	12.5	1,986	'69	'90
	TOTAL	15,885		1,986		
IMPERIAL OIL LIMITED	39	28,257	100	28,257	'68	'89
	40	49,603	"	49,603	"	"
	41	49,705	"	49,705	"	"
	42	49,739	"	49,739	"	"
	49	16,192	"	16,192	'69	'90
	TOTAL	193,496		193,496		
LAMONT, DONALD BRECK	54	15,885	7.5	1,191	'69	'90
	TOTAL	15,885		1,191		

TABLE 4 (Contd.)

COMPANY	OIL SANDS LEASES					
	LEASE NO.	ACRES	INTEREST %	ACRES	ISSUE/EXPIRY DATE	
MOBIL OIL CANADA, LTD.	45	46,470	100	46,470	'69	'90
	46	48,587	"	48,587	"	"
	47	38,002	"	38,002	"	"
	48	38,166	"	38,166	"	"
	58	11,508	"	11,508	'70	'91
	TOTAL	182,733		182,733		
SUN OIL COMPANY	53	4,220	100	4,220	'69	'90
	TOTAL	4,220		4,220		
SUPERTEST INVESTMENTS AND PETROLEUM LIMITED	54	15,885	22.5	3,574	'69	'90
	TOTAL	15,885		3,574		
TEXACO EXPLORATION CANADA LTD. (REGENT REFINING (CANADA) LIMITED)	52	40,909	100	40,909	'69	'90
	TOTAL	40,909		40,909		
UNION TEXAS OF CANADA, LTD.	56	7,456	100	7,456	'69	'90
	57	7,784	"	7,784	"	"
	TOTAL	15,240		15,240		
UNITED CANSO OIL & GAS LTD.	54	15,885	7.5	1,191	'69	'90
	TOTAL	15,885		1,191		
WESTCOAST PETROLEUM LTD.	63	22,721	100	22,721	'72	'93
	TOTAL	22,721		22,721		

ALL COMPANIES (INTEREST ACRES)

642,552

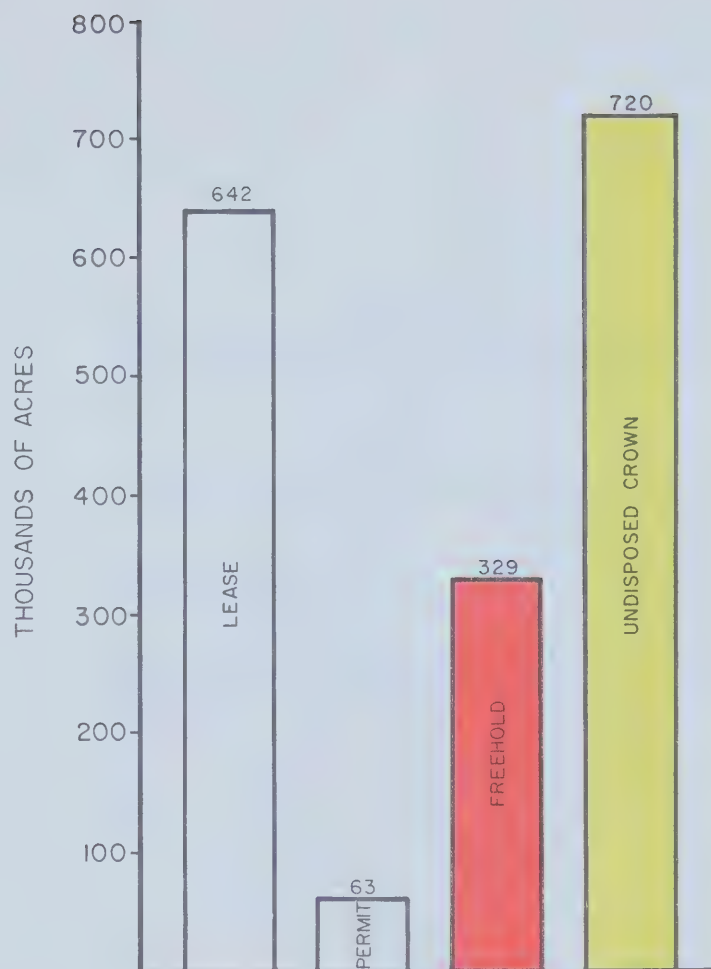


FIGURE 17: COMPARATIVE OIL SANDS ACREAGE HELD BY PRIVATE COMPANIES (CROWN LEASES AND PERMITS), THE ALBERTA GOVERNMENT (UNDISPOSED CROWN) AND FREEHOLD OWNERS IN THE COLD LAKE DEPOSITS

Comment: The relatively large amount of freehold property in these deposits is due to the fact that they extend into the agricultural areas of the Province. An unknown amount of these deposits extend northward under the Primrose Lake Air Weapons Range.

III. THE WABASCA DEPOSITS

1. Map of Evaluated Area
2. Comparative Crown Lease Holdings by Individual Companies
3. Detailed Tabulation of Company Crown Lease Holdings
4. Comparative Land Holdings of Private, Crown and Freehold Mineral Rights

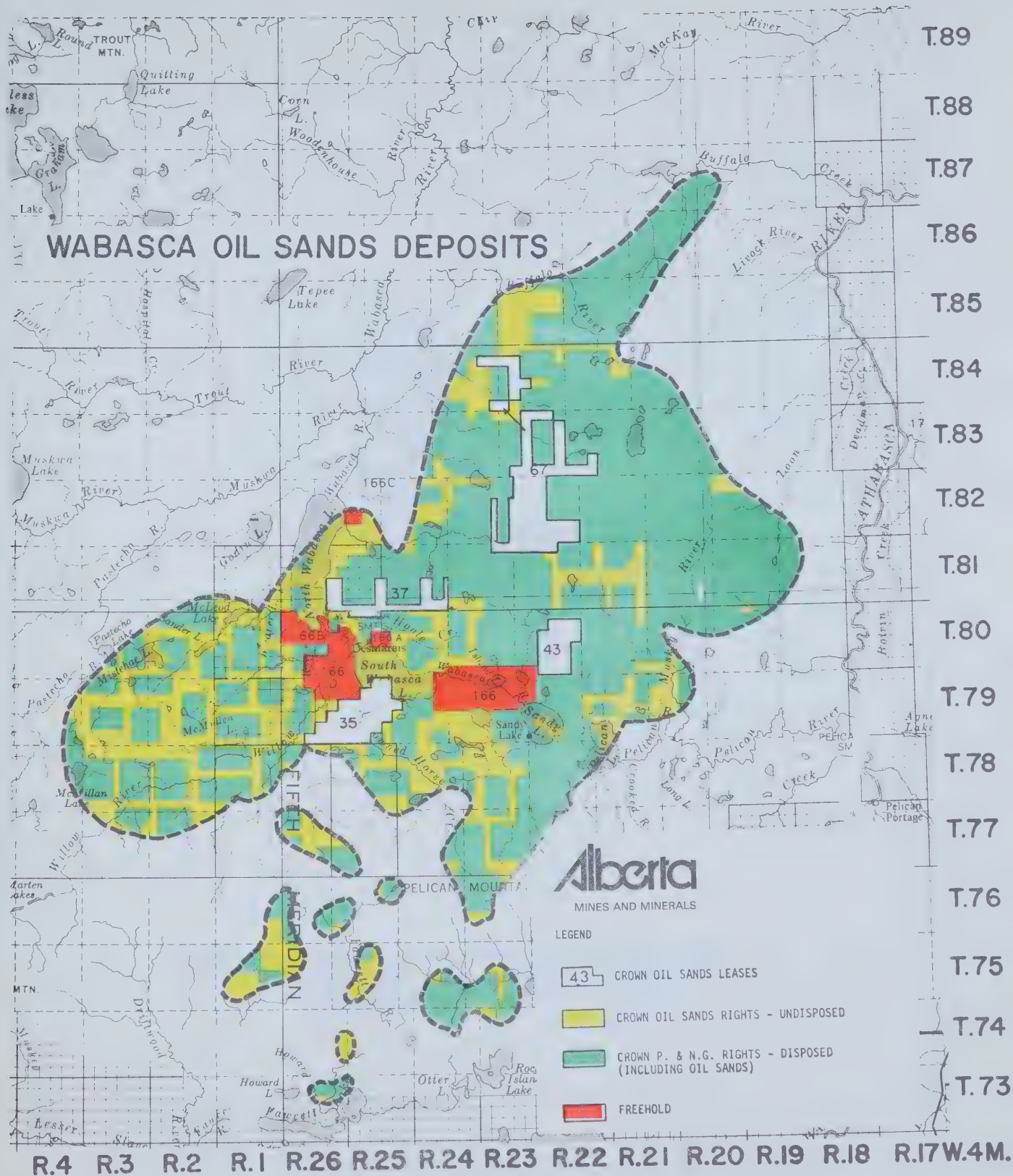


FIGURE 18: LAND DISPOSITION IN THE EVALUATED AREAS OF THE WABASCA DEPOSITS

Comments: The deposits' boundaries shown on this map include only the areas within which sufficient exploration data is available to make a reserve evaluation. The full extent of the deposits is as yet undetermined.

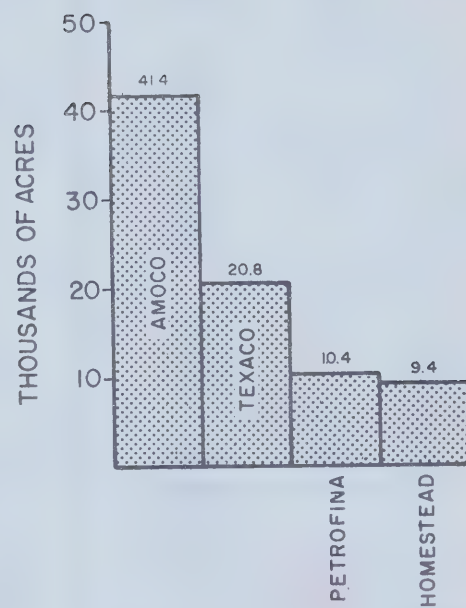


FIGURE 19: COMPARATIVE OIL SANDS ACREAGE HELD UNDER CROWN LEASE BY INDIVIDUAL COMPANIES IN THE WABASCA DEPOSITS

TABLE 5
DISPOSITION OF OIL SANDS LEASES
IN THE WABASCA DEPOSITS

COMPANY	OIL SANDS LEASES					
	<u>LEASE NO.</u>	<u>ACRES</u>	<u>%</u>	<u>INTEREST ACRES</u>	<u>ISSUE / EXPIRY DATE</u>	
AMOCO CANADA PETROLEUM COMPANY LTD. TOTAL	67	<u>41,457</u>	100	<u>41,457</u>	'73	'94
		41,457		41,457		
CANADIAN HOMESTEAD RESOURCES LIMITED TOTAL	35	<u>18,809</u>	50	<u>9,405</u>	'67	'88
		18,809		9,405		
PETROFINA CANADA LTD. TOTAL	43	<u>10,376</u>	100	<u>10,376</u>	'69	'90
		10,376		10,376		
TEXACO EXPLORATION CANADA LTD. (REGENT REFINING (CANADA) LIMITED) TOTAL	35 37	<u>18,809</u> <u>11,369</u>	50 100	<u>9,404</u> <u>11,369</u>	'67 "	'88 "
		30,178		20,773		

ALL COMPANIES (INTEREST ACRES)

82,011

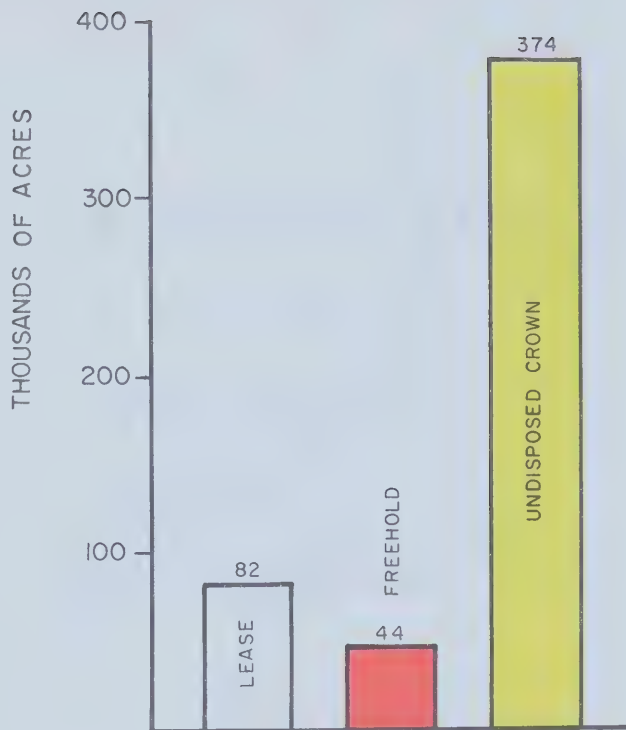


FIGURE 20: COMPARATIVE OIL SANDS ACREAGE HELD BY PRIVATE COMPANIES (CROWN LEASES), THE ALBERTA GOVERNMENT (UNDISPOSED CROWN) AND FREEHOLD OWNERS IN THE WABASCA DEPOSITS

Comment: The full extent of the Wabasca deposits has not yet been determined and oil sands acreage is still being actively sought in them. The potential of these deposits is the least known of all deposits.

IV. THE PEACE RIVER DEPOSIT

1. Map of Evaluated Area
2. Comparative Crown Lease Holdings by Individual Companies
3. Detailed Tabulation of Company Crown Lease Holdings
4. Comparative Land Holdings of Private, Crown and Freehold Mineral Rights

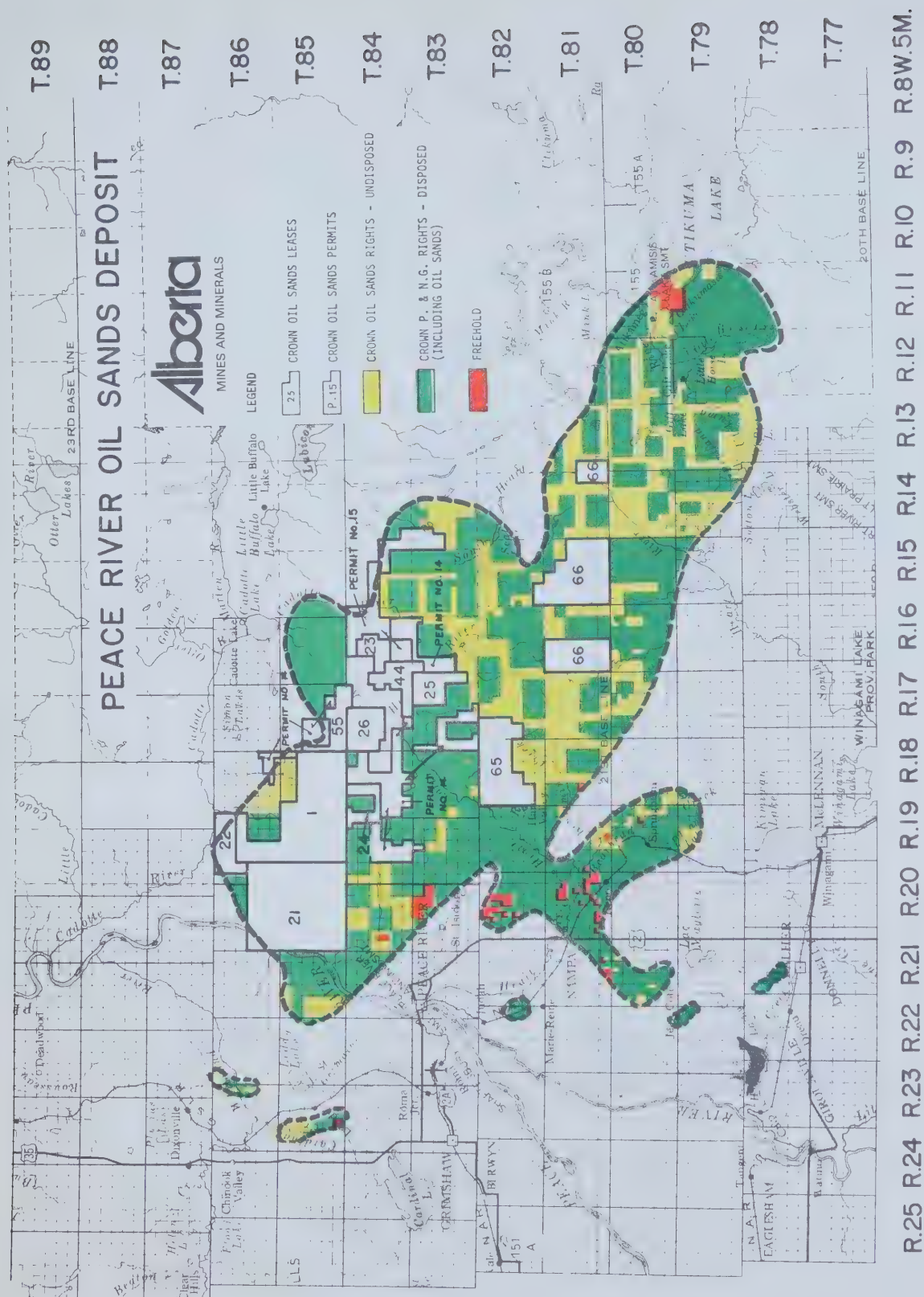


FIGURE 21: LAND DISPOSITION IN THE EVALUATED AREA OF THE PEACE RIVER DEPOSIT

Comment: The deposit boundary shown on this map includes only the area within which there is sufficient exploration data available to make a reserve evaluation. The full extent of this deposit is as yet undetermined.

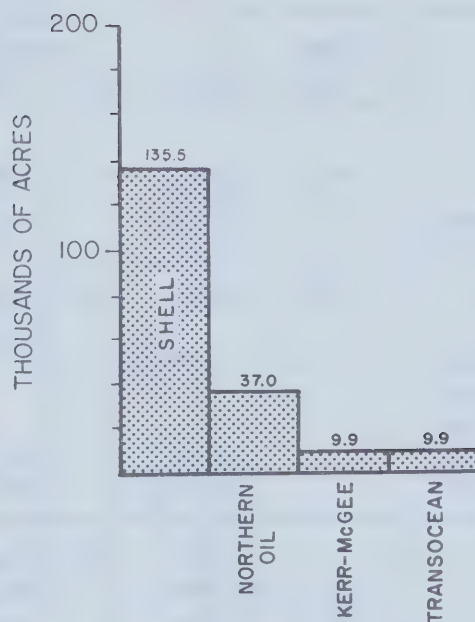


FIGURE 22: COMPARATIVE OIL SANDS ACREAGE HELD UNDER CROWN LEASE BY INDIVIDUAL COMPANIES IN THE PEACE RIVER DEPOSIT

Comment: A combination of geological conditions is believed to make this deposit more favourable for development by in situ methods than the Athabasca deposit.

The acreage within this deposit is held by very few companies.

TABLE 6
DISPOSITION OF OIL SANDS LEASES
IN THE PEACE RIVER DEPOSIT

COMPANY	OIL SANDS LEASES					
	LEASE NO	ACRES	INTEREST %	ACRES	ISSUE / EXPIRY DATE	
KERR - McGEE CORPORATION	65	19,801	50	9,900	'72	'93
TOTAL		19,801		9,900		
NORTHERN OIL EXPLORERS LTD. (GREAT PLAINS DEVELOPMENT COMPANY OF CANADA, LTD. 40%) (BARBER OIL CORPORATION 40%) (NORANDA MINES LTD. 20%)	66	36,969	100	36,969	'72	'93
TOTAL		36,969		36,969		
SHELL CANADA LIMITED	1	41,287	100	41,287	'61	'82
	21	46,843	"	46,843	'64	'85
	22	7,768	"	7,768	"	"
	23	4,540	"	4,540	"	"
	24	4,688	"	4,688	"	"
	25	7,120	"	7,120	"	"
	26	8,752	"	8,752	65	86
	44	7,444	"	7,444	69	90
	55	7,116	"	7,116	70	91
TOTAL		135,558		135,558		
TRANSOCEAN OIL, INC.	65	19,801	50	9,901	'72	'93
TOTAL		19,801		9,901		

ALL COMPANIES (INTEREST ACRES)

192,328

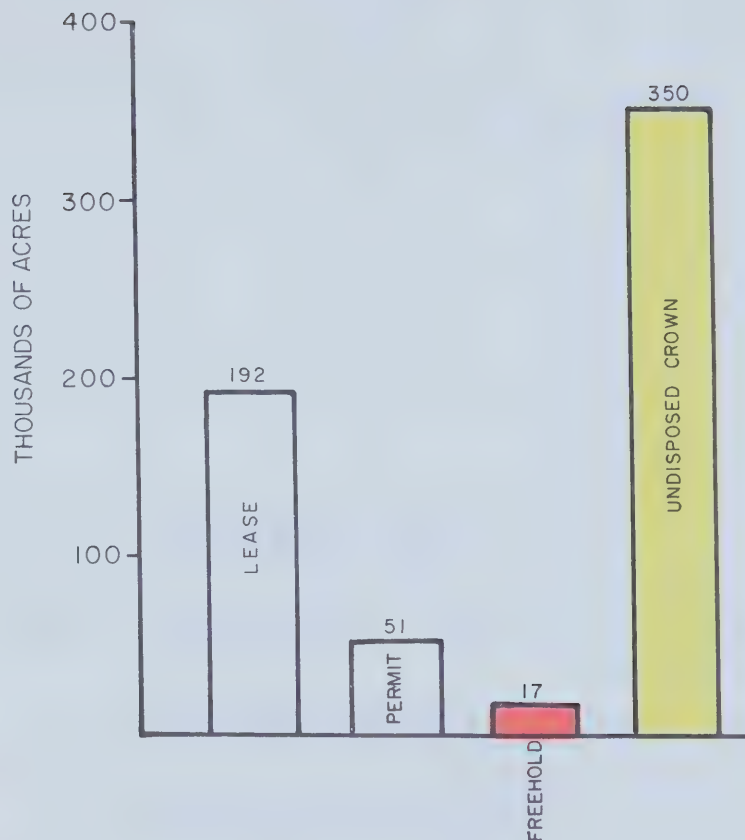


FIGURE 23: COMPARATIVE ACREAGE OF OIL SANDS RIGHTS HELD BY PRIVATE COMPANIES (CROWN LEASES AND PERMITS), THE ALBERTA GOVERNMENT (UNDISPOSED CROWN) AND FREEHOLD OWNERS IN THE PEACE RIVER DEPOSIT

SECTION 5

APPENDIX "A"

Specimen documents of:

Oil Sands and Bituminous Sands Lease
and Oil Sands Prospecting Permit

A - 1

Oil Sands and Bituminous Sands
Regulations and Amendments

A - 2



GOVERNMENT OF THE PROVINCE OF ALBERTA
DEPARTMENT OF MINES AND MINERALS
MINERALS DIVISION

Oil Sands Lease No.

File No.

This Indenture, made in duplicate this
day of _____ in the year of Our
Lord one thousand nine hundred and _____

Between:

HER MAJESTY THE QUEEN in right of Alberta, hereinafter called
"Her Majesty", represented herein by the Minister of Mines and
Minerals of the Province of Alberta, hereinafter called the "Minister",

OF THE FIRST PART;

AND

SPECIMEN

hereinafter called the "lessee",

OF THE SECOND PART:

WHEREAS under Alberta Regulation 378/62 the lessee applied
for a lease of oil sands rights in the lands hereinafter described; and

WHEREAS the Minister has granted the said application under the
provisions of The Mines and Minerals Act, 1962 and the said regulation
upon the terms and conditions herein contained.

NOW THEREFORE THIS INDENTURE WITNESSETH that in consideration of the rents and royalties hereinafter provided and subject to the terms and conditions hereinafter expressed, Her Majesty hereby grants unto the lessee in so far as the Crown has the right to grant the same the exclusive right to mine, quarry, work, remove, treat and process oil sands, including the recovery of any products therefrom, whether above or below the surface, in the _____ zone

as that zone is designated by the Oil and Gas Conservation Board in Zone

Designation No. _____

a copy of which is attached hereto, in

the lands described as follows, namely:

_____ hereinafter called the "location";
together with the right to dispose of the oil sands and any products recovered therefrom.

TO HAVE AND ENJOY the same for the term of twenty-one years,
to be computed from the _____ day of _____
_____, one thousand nine hundred and _____

renewable for one term of twenty-one years, and so long as the plant or other works hereinafter referred to are in operation, renewable for further terms each of twenty-one years, subject in each case of renewal to the terms and conditions prescribed at the time the renewal is granted, and to the provisions of The Mines and Minerals Act, 1962 and the regulations in force from time to time.

YIELDING AND PAYING therefor unto Her Majesty in every year during the first five years of the said term, the clear yearly rent or sum of Twenty-five Cents (25c) of lawful money of Canada for each and every acre comprised in the location and in every year during the remainder of the said term, the clear yearly rent or sum of One Dollar (\$1.00) of lawful money of Canada for each and every acre comprised in the location, payable yearly

in advance on the _____ day of _____ in

each year of the said term, the first payment having been made on or before the execution of this lease; and also rendering and paying therefor unto Her Majesty a royalty at such rate as may be prescribed from time to time by the Lieutenant Governor in Council

(a) on each of the products derived from the oil sands, provided that the royalty during the first term of this lease shall not exceed one-sixth of the products, and

(b) on oil sands taken from the location which are sold or otherwise disposed of without processing or treatment.

THE LESSEE HEREBY COVENANTS AND AGREES with Her Majesty as follows:

1. The lessee shall comply with the provisions of The Mines and Minerals Act, 1962, and any Act passed in substitution therefor, and any regulations that at any time may be made under the authority of the said Acts, and all such provisions and regulations that prescribe, relate to or affect the rights and obligations of lessees of oil sands rights, the property of the Crown, shall be deemed to be incorporated into this lease and shall bind the lessee in the same manner and to the same extent as if the same were set out herein as covenants on the part of the lessee. Each and every provision or regulation hereafter made shall be deemed to be incorporated into this lease and shall bind the lessee as and from the date it comes into force, but in the event of conflict between any regulation hereafter made and any regulation previously made the regulation last made shall prevail.

2. The lessee shall not enter upon the location or any part thereof when the right to the use of the surface is vested in some person other than the lessee until the lessee has complied with The Right of Entry Arbitration Act or any Act passed in substitution therefor.

3. The lessee shall comply with the provisions of The Oil and Gas Conservation Act and any order of the Oil and Gas Conservation Board made thereunder, The Quarries Regulation Act and any order of the Director of Mines made thereunder and any regulations that at any time may be made under the authority of either of the said Acts, and all such provisions, orders and regulations shall be deemed to be incorporated into this lease and shall bind the lessee in the same manner and to the same extent as if the same were set out herein as covenants on the part of the lessee. Each and every provision, order or regulation hereafter made shall be deemed to be incorporated into this lease and shall bind the lessee as and from the date it comes into force, but in the event of conflict between any order or regulation hereafter made and any order or regulation previously made the order or regulation last made shall prevail.

4. The lessee within one year from the date upon which the lessee is given notice by the Minister to do so, shall commence the construction of a plant or other works which upon completion shall have a minimum capacity to process

tons

of bituminous sands a day or to extract from the sands

barrels

of products a day and shall complete the plant or other works and place the same in operation within four years from the date of the notice by the Minister, and thereafter shall carry on the processing of the bituminous sands or extraction of products diligently and continuously to the satisfaction of the Minister. The notice by the Minister shall not be given until the expiration of one year from the date hereof.

5. The lessee shall keep correct records showing the quantity of each of the products recovered from the bituminous sands and the quantity of bituminous sands taken from the location, and whenever required to do so shall submit such records for inspection to an inspector of the Department or other person authorized by the Minister.

6. The lessee shall well and truly pay or cause to be paid to the Department at Edmonton, the rent and royalty payable under this lease, and the lessee or his agent authorized in writing shall not later than the twenty-fifth day of the month file with the Department, on forms prescribed by the Minister, a full report of production, disposition and sales during the preceding month.

7. The lessee shall make such provision for the disposal of the earth, rock, waste or refuse from his workings on the location that the same shall not be an inconvenience, nuisance or obstruction to any railway right of way, roadway, pass, passage, river, creek, or place, or to any private, public or Crown lands, or conflict with or embarrass the operating of any mine or quarry on the location or on adjoining lands, or in any manner whatsoever occasion any private or public damage, nuisance or inconvenience.

8. The lessee shall deliver to the Minister, within such time as the Minister may specify, a statutory declaration by the lessee or on his behalf, setting out such information as the Minister may direct with reference to any operation or proceeding of the lessee in respect of any mine, quarry or other work constructed or operated under the authority of this lease.

9. The lessee shall permit an inspector of the Department or other person authorized by the Minister, with all proper or necessary assistants, at all reasonable times, to enter into and upon any part or parts of the location occupied by the lessee and any buildings, mines, quarries, structures and erections thereon and into any part thereof, and to survey and examine the state and condition thereof, if in doing so no unnecessary interference is caused with the carrying on of the work of the lessee; and the lessee by all means in his power shall aid and facilitate the inspector or other person in making such entry, survey and examination.

10. The lessee shall not injure or endanger the buildings or other structures now or hereafter being on any part of the location.

11. If at any time, whether heretofore or hereafter, a well is drilled for the purpose of exploring for or recovering petroleum, natural gas, salt or any other mineral, the lessee shall leave unmined a barrier surrounding the casing or bore-hole of the well extending a distance of sixty feet in every direction from such casing or bore-hole, or such other distance as may be required or prescribed by the Director of Mines.

12. The lessee hereby assumes all liability for all damages of any nature whatsoever caused by the lessee, his servants, workmen, agents or licensees or in any way due to any mining, quarrying, work, construction, reconstruction, operation and patrolling carried on upon, in or under the location whether the same has been negligently mined, quarried, worked, constructed, reconstructed, operated, patrolled or not.

13. The lessee shall keep Her Majesty indemnified against all claims and demands that may be made against Her Majesty by reason of anything done by the lessee, his servants, workmen, agents or licensees, in the exercise or purported exercise of the rights granted under this lease.

14. The lessee shall pay and discharge all taxes now charged or hereafter to be charged upon the rights granted under this lease.

HER MAJESTY AND THE LESSEE HEREBY COVENANT AND AGREE as follows:

15. The Minister, in his sole discretion, may reduce to Twenty-five Cents (25c) an acre the rental payable in any year until production operations are commenced on the location.

16. If and whenever the rent or royalty hereby reserved, or any part thereof, is in arrears and unpaid for a period of more than thirty days, or if default is made by the lessee in the performance or observance of any of the covenants on the part of the lessee herein contained for a period of thirty days from and after the date of the sending by mail of a notice by or on behalf of the Minister to the lessee of such default, then and in every such case and as often as the same may happen, and notwithstanding any previous waiver, the Minister by writing may cancel this lease, and thereupon this lease shall become and be terminated, and be null and void for all purposes other than and except as to any liability of the lessee under the same incurred before and subsisting at the day when the lease is cancelled.

17. Any notice that Her Majesty or the Minister may desire to serve upon the lessee shall be served sufficiently upon the lessee if posted to him addressed to his last known address, or if left at the said address. A notice sent by post shall be deemed to be given at the time of mailing the notice.

18. Any notice, demand, notice of cancellation or default, or other communication, that Her Majesty or the Minister may require or desire to give or serve upon the lessee may be given or served by the Minister, Director of Minerals, or any other officer of the Department duly authorized in writing by the Minister.

19. No waiver on behalf of Her Majesty of any breach of any of the terms or conditions herein contained, whether negative or positive in form, shall take effect or be binding upon Her Majesty, unless the same be expressed in writing under the authority of the Minister, and any waiver so expressed shall not limit or affect Her Majesty's rights with respect to any other or future breach.

20. No implied covenant or liability of any kind on Her Majesty's part is created by the use of the words "lessee" or "lease" herein or by the use of any other word or words herein, or shall otherwise arise by reason of this lease or anything herein contained.

21. If the rights granted under this lease at any time are seized or taken in execution or in attachment by any creditor of the lessee, or if the lessee makes any assignment for the benefit of creditors, or becoming bankrupt or insolvent, takes the benefit of any Act that may be in force for bankrupt or insolvent debtors, this lease may be cancelled by the Minister unless all rents and royalties in arrears are paid.

22. This lease shall be so construed as to inure to the benefit of the lessee and such of his heirs, executors, administrators, successors and assigns as are entitled or permitted to benefit thereunder pursuant to The Mines and Minerals Act, 1962, and to no other persons.

(7)

23. The expression "Minister" means the Minister of Mines and Minerals for the time being and includes the Deputy Minister of Mines and Minerals and the expression "Department" means the Department of Mines and Minerals.

IN WITNESS WHEREOF the parties hereto have executed this indenture as of the day and year first above written.

SIGNED, SEALED AND DELIVERED

in the presence of

Minister of Mines and Minerals.

And by the lessee in the presence of

Witness as to Lessee.

Lessee.

SPECIMEN



GOVERNMENT OF THE PROVINCE OF ALBERTA
DEPARTMENT OF MINES AND MINERALS
MINERALS DIVISION

Bituminous Sands Lease No.

File No.

This Indenture, made in duplicate this
day of _____ in the year of Our
Lord one thousand nine hundred and

Between:

HER MAJESTY THE QUEEN in right of Alberta, hereinafter called
"Her Majesty", represented herein by the Minister of Mines and
Minerals of the Province of Alberta, hereinafter called the "Minister",

OF THE FIRST PART;

AND

SPECIMEN

hereinafter called the "lessee",

OF THE SECOND PART:

WHEREAS under Alberta Regulation 342/62 the lessee applied
for a lease of bituminous sands rights in the lands hereinafter described;
and

WHEREAS the Minister has granted the said application under the
provisions of The Mines and Minerals Act, 1962 and the said regulation
upon the terms and conditions herein contained.

(2)

NOW THEREFORE THIS INDENTURE WITNESSETH that in consideration of the rents and royalties hereinafter provided and subject to the terms and conditions hereinafter expressed, Her Majesty hereby grants unto the lessee in so far as the Crown has the right to grant the same the exclusive right to mine, quarry, work, remove, treat and process bituminous sands, including the recovery of any products therefrom, whether above or below the surface, in the lands described as follows, namely:

hereinafter called the "location";
together with the right to dispose of the bituminous sands and any products recovered therefrom.

TO HAVE AND ENJOY the same for the term of twenty-one years,
to be computed from the _____ day of _____
_____, one thousand nine hundred and _____

renewable for one term of twenty-one years, and so long as the plant or other works hereinafter referred to are in operation, renewable for further terms each of twenty-one years, subject in each case of renewal to the terms and conditions prescribed at the time the renewal is granted, and to the provisions of The Mines and Minerals Act, 1962 and the regulations in force from time to time.

YIELDING AND PAYING therefor unto Her Majesty in every year during the first five years of the said term, the clear yearly rent or sum of Twenty-five Cents (25c) of lawful money of Canada for each and every acre comprised in the location and in every year during the remainder of the said term, the clear yearly rent or sum of One Dollar (\$1.00) of lawful money of Canada for each and every acre comprised in the location, payable yearly

in advance on the _____ day of _____ in

each year of the said term, the first payment having been made on or before the execution of this lease; and also rendering and paying therefor unto Her Majesty a royalty at such rate as may be prescribed from time to time by the Lieutenant Governor in Council.

- (a) on each of the products derived from the bituminous sands, provided that the royalty during the first term of this lease shall not exceed one-sixth of the products, and
- (b) on bituminous sands taken from the location which are sold or otherwise disposed of without processing or treatment.

THE LESSEE HEREBY COVENANTS AND AGREES with Her Majesty as follows:

1. The lessee shall comply with the provisions of The Mines and Minerals Act, 1962, and any Act passed in substitution therefor, and any regulations that at any time may be made under the authority of the said Acts, and all such provisions and regulations that prescribe, relate to or affect the rights and obligations of lessees of bituminous sands rights, the property of the Crown, shall be deemed to be incorporated into this lease and shall bind the lessee in the same manner and to the same extent as if the same were set out herein as covenants on the part of the lessee. Each and every provision or regulation hereafter made shall be deemed to be incorporated into this lease and shall bind the lessee as and from the date it comes into force, but in the event of conflict between any regulation hereafter made and any regulation previously made the regulation last made shall prevail.

2. The lessee shall not enter upon the location or any part thereof when the right to the use of the surface is vested in some person other than the lessee until the lessee has complied with The Right of Entry Arbitration Act or any Act passed in substitution therefor.

3. The lessee shall comply with the provisions of The Oil and Gas Conservation Act and any order of the Oil and Gas Conservation Board made thereunder, The Quarries Regulation Act and any order of the Director of Mines made thereunder and any regulations that at any time may be made under the authority of either of the said Acts, and all such provisions, orders and regulations shall be deemed to be incorporated into this lease and shall bind the lessee in the same manner and to the same extent as if the same were set out herein as covenants on the part of the lessee. Each and every provision, order or regulation hereafter made shall be deemed to be incorporated into this lease and shall bind the lessee as and from the date it comes into force, but in the event of conflict between any order or regulation hereafter made and any order or regulation previously made the order or regulation last made shall prevail.

4. The lessee within one year from the date upon which the lessee is given notice by the Minister to do so, shall commence the construction of a plant or other works which upon completion shall have a minimum capacity to process

tons

of bituminous sands a day or to extract from the sands

barrels

of products a day and shall complete the plant or other works and place the same in operation within four years from the date of the notice by the Minister, and thereafter shall carry on the processing of the bituminous sands or extraction of products diligently and continuously to the satisfaction of the Minister. The notice by the Minister shall not be given until the expiration of one year from the date hereof.

5. The lessee shall keep correct records showing the quantity of each of the products recovered from the bituminous sands and the quantity of bituminous sands taken from the location, and whenever required to do so shall submit such records for inspection to an inspector of the Department or other person authorized by the Minister.

6. The lessee shall well and truly pay or cause to be paid to the Department at Edmonton, the rent and royalty payable under this lease, and the lessee or his agent authorized in writing shall not later than the twenty-fifth day of the month file with the Department, on forms prescribed by the Minister, a full report of production, disposition and sales during the preceding month.

7. The lessee shall make such provision for the disposal of the earth, rock, waste or refuse from his workings on the location that the same shall not be an inconvenience, nuisance or obstruction to any railway right of way, roadway, pass, passage, river, creek, or place, or to any private, public or Crown lands, or conflict with or embarrass the operating of any mine or quarry on the location or on adjoining lands, or in any manner whatsoever occasion any private or public damage, nuisance or inconvenience.

8. The lessee shall deliver to the Minister, within such time as the Minister may specify, a statutory declaration by the lessee or on his behalf, setting out such information as the Minister may direct with reference to any operation or proceeding of the lessee in respect of any mine, quarry or other work constructed or operated under the authority of this lease.

9. The lessee shall permit an inspector of the Department or other person authorized by the Minister, with all proper or necessary assistants, at all reasonable times, to enter into and upon any part or parts of the location occupied by the lessee and any buildings, mines, quarries, structures and erections thereon and into any part thereof, and to survey and examine the state and condition thereof, if in doing so no unnecessary interference is caused with the carrying on of the work of the lessee; and the lessee by all means in his power shall aid and facilitate the inspector or other person in making such entry, survey and examination.

10. The lessee shall not injure or endanger the buildings or other structures now or hereafter being on any part of the location.

11. If at any time, whether heretofore or hereafter, a well is drilled for the purpose of exploring for or recovering petroleum, natural gas, salt or any other mineral, the lessee shall leave unmined a barrier surrounding the casing or bore-hole of the well extending a distance of sixty feet in every direction from such casing or bore-hole, or such other distance as may be required or prescribed by the Director of Mines.

12. The lessee hereby assumes all liability for all damages of any nature whatsoever caused by the lessee, his servants, workmen, agents or licensees or in any way due to any mining, quarrying, work, construction, reconstruction, operation and patrolling carried on upon, in or under the location whether the same has been negligently mined, quarried, worked, constructed, reconstructed, operated, patrolled or not.

13. The lessee shall keep Her Majesty indemnified against all claims and demands that may be made against Her Majesty by reason of anything done by the lessee, his servants, workmen, agents or licensees, in the exercise or purported exercise of the rights granted under this lease.

14. The lessee shall pay and discharge all taxes now charged or hereafter to be charged upon the rights granted under this lease.

HER MAJESTY AND THE LESSEE HEREBY COVENANT AND AGREE as follows:

15. The Minister, in his sole discretion, may reduce to Twenty-five Cents (25c) an acre the rental payable in any year until production operations are commenced on the location.

16. If and whenever the rent or royalty hereby reserved, or any part thereof, is in arrears and unpaid for a period of more than thirty days, or if default is made by the lessee in the performance or observance of any of the covenants on the part of the lessee herein contained for a period of thirty days from and after the date of the sending by mail of a notice by or on behalf of the Minister to the lessee of such default, then, and in every such case and as often as the same may happen, and notwithstanding any previous waiver, the Minister by writing may cancel this lease, and thereupon this lease shall become and be terminated, and be null and void for all purposes other than and except as to any liability of the lessee under the same incurred before and subsisting at the day when the lease is cancelled.

17. Any notice that Her Majesty or the Minister may desire to serve upon the lessee shall be served sufficiently upon the lessee if posted to him addressed to his last known address, or if left at the said address. A notice sent by post shall be deemed to be given at the time of mailing the notice.

18. Any notice, demand, notice of cancellation or default, or other communication, that Her Majesty or the Minister may require or desire to give or serve upon the lessee may be given or served by the Minister, Director of Minerals, or any other officer of the Department duly authorized in writing by the Minister.

19. No waiver on behalf of Her Majesty of any breach of any of the terms or conditions herein contained, whether negative or positive in form, shall take effect or be binding upon Her Majesty, unless the same be expressed in writing under the authority of the Minister, and any waiver so expressed shall not limit or affect Her Majesty's rights with respect to any other or future breach.

20. No implied covenant or liability of any kind on Her Majesty's part is created by the use of the words "lessee" or "lease" herein or by the use of any other word or words herein, or shall otherwise arise by reason of this lease or anything herein contained.

21. If the rights granted under this lease at any time are seized or taken in execution or in attachment by any creditor of the lessee, or if the lessee makes any assignment for the benefit of creditors, or becoming bankrupt or insolvent, takes the benefit of any Act that may be in force for bankrupt or insolvent debtors, this lease may be cancelled by the Minister unless all rents and royalties in arrears are paid.

22. This lease shall be so construed as to inure to the benefit of the lessee and such of his heirs, executors, administrators, successors and assigns as are entitled or permitted to benefit thereunder pursuant to The Mines and Minerals Act, 1962, and to no other persons.

(7)

23. The expression "Minister" means the Minister of Mines and Minerals for the time being and includes the Deputy Minister of Mines and Minerals and the expression "Department" means the Department of Mines and Minerals.

IN WITNESS WHEREOF the parties hereto have executed this indenture as of the day and year first above written.

SIGNED, SEALED AND DELIVERED
in the presence of

For Minister of Mines and Minerals.

And by the lessee in the presence of

Witness as to Lessee.

Lessee.



File No. _____

GOVERNMENT OF THE PROVINCE OF ALBERTA
DEPARTMENT OF MINES AND MINERALS

MINERALS DIVISION

OIL SANDS PROSPECTING PERMIT NO.

Know all Men by These Presents that in consideration of and subject to the terms and conditions hereinafter contained, PERMIT is hereby granted of the Oil Sands Rights, the property of the Crown in right of Alberta, to

SPECIMEN

heirs, executors, administrators, successors and assigns in accordance with the Oil Sands Regulations, 1962 in the

This permit is subject to the Oil Sands Regulations, 1962.

IN WITNESS WHEREOF I have hereto set my hand and the seal
of the Department at the City of Edmonton, in the Province of Alberta,
as of the _____ day of _____, 19____.

Director of Minerals.

DEPOSIT \$_____.

SPECIMEN

GOVERNMENT OF THE PROVINCE OF ALBERTA

ALBERTA REGULATION 131/69

(Filed May 14, 1969)

THE MINES AND MINERALS ACT, 1962

(O.C. 808/69)

Approved and Ordered,

GRANT MacEWAN,

Lieutenant Governor.

Edmonton May 13, 1969.

Upon the recommendation of the Honourable the Minister of Mines and Minerals, dated May 7, 1969, the Executive Council advises that, pursuant to clause (b) of section 172 of The Mines and Minerals Act, 1962, the Lieutenant Governor in Council hereby makes regulations in accordance with the attached Appendix, being Regulations to Amend the Oil Sands Regulations, 1962.

HARRY E. STROM (Chairman).

REGULATIONS TO AMEND THE

OIL SANDS REGULATIONS, 1962

under

THE MINES AND MINERALS ACT, 1962

1. The Oil Sands Regulations, 1962, filed as Alberta Regulation 378/62, are hereby amended.

2. Section 26 is struck out and the following is substituted:

26. The term of a lease shall be twenty-one years,

(a) renewable for one term of twenty-one years, and

(b) so long as the plant or other works are in operation, renewable for further terms each of twenty-one years,

subject in each case of renewal to the terms and conditions prescribed at the time the renewal is granted, and to the provisions of The Mines and Minerals Act, 1962 and the regulations.

(Extract from *The Alberta Gazette* of May 31, 1969)

GOVERNMENT OF THE PROVINCE OF ALBERTA

ALBERTA REGULATION 395/68

(Filed December 12, 1968)

THE MINES AND MINERALS ACT, 1962

O.C. 2254/68.

Approved and Ordered,

GRANT MacEWAN,

Lieutenant Governor.

Edmonton, December 10, 1968.

Upon the recommendation of the Honourable the Minister of Mines and Minerals, dated December 3, 1968, the Executive Council advises that the Lieutenant Governor in Council, pursuant to clause (b) of section 172 of The Mines and Minerals Act, 1962, hereby makes regulations in accordance with the attached Schedule, being Regulations to Amend the Oil Sands Regulations, 1962.

ERNEST C. MANNING (Chairman).

REGULATIONS TO AMEND THE
OIL SANDS REGULATIONS, 1962

1. The Oil Sands Regulations, 1962, filed as Alberta Regulation 378/62, are hereby amended.

2. Section 6 is amended by striking out subsection (2) and by substituting the following:

- (2) The deposit may be in the form of
 - (a) cash,
 - (b) negotiable bearer bonds,
 - (i) of the Government of Canada or the Province of Alberta, or
 - (ii) guaranteed as to principal and interest by the Province of Alberta,subject to an interest rate of not less than six per cent per annum, or with a date of maturity not more than six years after the date of presentation, or
- (c) term savings certificates issued by a treasury branch under The Treasury Branches Act and assigned as to principal to the Minister.

(Extract from *The Alberta Gazette*, December 31, 1968)

GOVERNMENT OF THE PROVINCE OF ALBERTA

ALBERTA REGULATION 378/62

OIL SANDS REGULATIONS

under

THE MINES AND MINERALS ACT, 1962

(O.C. 1010/62)

(Filed July 5, 1962)

1. These regulations may be cited as the "Oil Sands Regulations, 1962".
2. In these regulations,
 - (a) "Department" means the Department of Mines and Minerals;
 - (b) "Director" means the Director of Minerals;
 - (c) "lease" means an oil sands lease;
 - (d) "Minister" means the Minister of Mines and Minerals;
 - (e) "oil sands" and "oil sands rights" have the meaning given in The Mines and Minerals Act, 1962;
 - (f) "permit" means an oil sands prospecting permit.
3. These regulations do not apply to that part of the Province within townships 84 to 104 inclusive in ranges 4 to 18 inclusive, west of the 4th meridian.
4. (1) Upon drilling a well or wells determining the presence of oil sands, the holder of a reservation or permit of petroleum and natural gas rights may apply for an oil sands prospecting permit or an oil sands lease in lands contained in the reservation or permit.

(2) Where an applicant under subsection (1) is the holder of an adjacent reservation or permit of petroleum and natural gas rights, he may include in his application lands contained in the adjacent reservation or permit.

Permits
5. An application for a permit shall be filed at the office of the Director and may be granted subject to the provisions of these regulations.
6. (1) The application shall be accompanied by
 - (a) a fee of \$250.00,
 - (b) the rental for one year at five cents an acre, and
 - (c) a deposit of \$50,000.00.
(2) The deposit may be in the form of
 - (a) cash,
 - (b) negotiable bearer bonds of the Government of Canada or the Province of Alberta,
 - (c) negotiable bearer bonds guaranteed as to principal and interest by the Province of Alberta,
 - (d) savings certificates issued under The Savings Certificates Act, or
 - (e) term saving certificates issued by a treasury branch under The Treasury Branches Act and assigned as to principal to the Minister.
(3) The fee, rental and deposit shall be refunded if the granting of the permit is refused.

(4) The deposit shall be held by the Department as a guarantee that the examination will be carried out in accordance with these regulations.

(5) The deposit shall be forfeited to the Crown if during the currency of the permit an examination satisfactory to the Minister was not made in accordance with the plan of examination.

7. The maximum area of a permit shall be 50,000 acres and its boundaries shall be in the discretion of the Minister.

8. The proposed plan of examination to be conducted shall be included in the application and if the proposed plan is approved by the Minister the application may be granted.

9. When an application is granted the applicant shall surrender out of his reservation or permit the petroleum and natural gas in the zone containing the oil sands within the lands to be included in the permit.

10. The permit shall be in such form as may be determined by the Minister and may include such terms and conditions as the Minister may prescribe.

11. (1) The permittee is prohibited from transferring a part of the location contained in the permit.

(2) Subject to subsection (1) the permittee may transfer the permit to the extent permitted under The Mines and Minerals Act, 1962.

12. (1) A permit conveys the right to search for, mine, quarry, work and remove oil sands in lands contained in the permit and to extract products therefrom in an amount necessary for the permittee to carry out proper tests of the oil sands, but subject to any exceptions expressed in the permit.

(2) The permittee shall not dispose of oil sands or products recovered therefrom without the consent in writing of the Minister.

13. (1) The term of a permit shall be one year from the date of the permit, renewable for a second term of one year upon payment of rental for the second year at the rate of ten cents an acre and renewable for a third term of one year upon payment of rental for the third year at the rate of ten cents an acre.

(2) With each application for renewal the permittee shall supply a report on the progress of the examination carried out together with an estimate of the cost thereof and particulars of the extent and nature of the work to be conducted during the next term.

14. The plan of examination as approved may not be subsequently varied in any way without the consent of the Minister.

15. The permittee shall furnish to the Minister or to his authorized representative a complete copy of every log taken of each hole drilled and such other information, data and reports pertaining to the examination as the Minister may from time to time require.

16. Upon the termination of a permit, the permittee shall furnish to the Director a statutory declaration setting forth the several items of expenditure incurred in the examination and the specific purpose for which each item was expended.

17. A permittee may surrender at any time, or from time to time, any part of the lands contained in the permit.

18. A permit may be terminated at any time at the option of the permittee, and if he has complied with these regulations he shall have the exclusive right to apply for a lease of oil sands rights in lands contained in the permit.

19. If a permittee does not make application for a lease and has complied with the terms and conditions of the permit to the satisfaction of the Minister, the deposit will be refunded.

20. The permittee shall comply with the provisions of The Mines and Minerals Act, 1962, The Quarries Regulation Act and The Oil and Gas Conservation Act, and with the provisions of any regulations now made or that at any time hereafter may be made under any of the said Acts.

21. In the event of failure to comply with any of the terms or conditions of the permit, the Minister shall cause written notice to be mailed to the permittee indicating that the permit may be cancelled unless within thirty days after the date of the notice the permittee remedies the default to the satisfaction of the Minister.

Leases

22. The lands that may be acquired under lease shall be determined by the Minister after consultation with the permittee and after taking into consideration the extent and nature of the oil sands proven by the permittee's examination, the proposed capacity of the plant or other works to be constructed and the requirements for operation thereof for a period of at least thirty years.

23. A lease grants the oil sands rights in the location, but subject to any exceptions expressed in the lease.

24. (1) A lease shall require that within one year from the date upon which the lessee is given notice by the Minister to do so, the lessee shall commence the construction of the plant or other works, and shall complete the plant or other works and place the same in operation within four years from the date of the notice by the Minister, and thereafter shall carry on the processing of the oil sands or extraction of products diligently and continuously to the satisfaction of the Minister.

(2) The notice by the Minister shall not be given until the expiration of at least one year from the date of the lease.

25. A lease shall bear the date of issue but the term of the lease shall commence on the date the application was made.

26. The term of a lease shall be twenty-one years, renewable for further terms each of twenty-one years so long as the plant or other works are in operation, subject in each case of renewal to the terms and conditions prescribed at the time the renewal is granted, and to the provisions of The Mines and Minerals Act, 1962 and the regulations.

27. A lease shall be in such form as may be determined by the Minister and may include such terms and conditions as the Minister may prescribe.

28. The annual rental of a lease, payable yearly in advance, shall be
 (a) twenty-five cents an acre for the first five years of the term of the lease, and
 (b) one dollar an acre for the balance of the term and any

renewal thereof but the Minister, in his sole discretion, may reduce to twenty-five cents an acre the rental payable in any year until the location is in production.

29. (1) The deposit for a lease shall be \$5.00 for each acre contained in the lease but in no case shall the maximum deposit exceed \$50,000.00 or the minimum be less than \$10,000.00.

(2) Where application for lease is made at the termination of a permit any deposit in excess of the deposit required for the lease shall be refunded.

(3) Upon the completion of the construction of the plant or other works satisfactory to the Minister, the deposit shall be refunded.

30. The lessee or his agent authorized in writing shall, not later than the twenty-fifth day of the month, file with the Department, on forms prescribed by the Minister, a full report of the production, disposition and sales during the preceding month.

31. (1) The lessee may surrender his lease at any time or with the consent of the Minister may surrender at any time or from time to time any part of the lands contained in the lease.

(2) Upon surrender of a lease, the deposit shall be refunded if the lessee has complied with the terms and conditions of the lease.

32. (1) The lessee is prohibited from transferring a part of the location contained in the lease unless the consent of the Minister is first obtained.

(2) Subject to subsection (1) the lessee may transfer the lease to the extent permitted under The Mines and Minerals Act, 1962.

General

33. Where application is made for a lease without first having obtained a permit the Minister may grant the lease subject to these regulations as far as practicable.

34. The Minister from time to time may make such orders as he may deem necessary for the effective administration of these regulations, and where any question arises pertaining to the interpretation or application of these regulations the Minister shall be the sole judge and there shall be no appeal from his decision.

35. These regulations apply to all oil sands prospecting permits and oil sands leases granted before the coming into force of these regulations.

36. Regulations Governing Disposition of Oil Sands Rights the Property of the Crown, filed as Alberta Regulation 144/61, are hereby repealed.

GOVERNMENT OF THE PROVINCE OF ALBERTA

ALBERTA REGULATION 130/69

(Filed May 14, 1969)

THE MINES AND MINERALS ACT, 1962

(O.C. 807/69)

Approved and Ordered,
GRANT MacEWAN,

Lieutenant Governor.

Edmonton, May 13, 1969.

Upon the recommendation of the Honourable the Minister of Mines and Minerals, dated May 7, 1969, the Executive Council advises that, pursuant to clause (a) of section 172 of The Mines and Minerals Act, 1962, the Lieutenant Governor in Council hereby makes regulations in accordance with the attached Appendix, being Regulations to Amend the Bituminous Sands Regulations, 1962.

HARRY E. STROM (Chairman).

REGULATIONS TO AMEND THE BITUMINOUS
SANDS REGULATIONS, 1962

under

THE MINES AND MINERALS ACT, 1962

1. The Bituminous Sands Regulations, 1962, filed as Alberta Regulation 342/62, are hereby amended.

2. Section 23 is struck out and the following is substituted:

23. The term of a lease shall be twenty-one years,

(a) renewable for one term of twenty-one years, and

(b) so long as the plant or other works are in operation, renewable for further terms each of twenty-one years,

subject in each case of renewal to the terms and conditions prescribed at the time the renewal is granted, and to the provisions of The Mines and Minerals Act, 1962 and the regulations.

(Extract from *The Alberta Gazette* of May 31, 1969)

GOVERNMENT OF THE PROVINCE OF ALBERTA

ALBERTA REGULATION 394/68

(Filed December 12, 1968)

THE MINES AND MINERALS ACT, 1962

O.C. 2253/68

Approved and Ordered,

GRANT MacEWAN,

Lieutenant Governor.

Edmonton, December 10, 1968.

Upon the recommendation of the Honourable the Minister of Mines and Minerals, dated December 3, 1968, the Executive Council advises that the Lieutenant Governor in Council, pursuant to clause (a) of section 172 of The Mines and Minerals Act, 1962, hereby makes regulations in accordance with the attached Schedule, being Regulations to Amend the Bituminous Sands Regulations, 1962.

ERNEST C. MANNING (Chairman).

REGULATIONS TO AMEND THE

BITUMINOUS SANDS REGULATIONS, 1962

1. The Bituminous Sands Regulations, 1962, filed as Alberta Regulation 342/62, are hereby amended.

2. Section 4 is amended by striking out subsection (2) and by substituting the following:

- (2) The deposit may be in the form of
 - (a) cash,
 - (b) negotiable bearer bonds
 - (i) of the Government of Canada or the Province of Alberta, or
 - (ii) guaranteed as to principal and interest by the Province of Alberta,
 - subject to an interest rate of not less than six per cent per annum, or with a date of maturity not more than six years after the date of presentation, or
 - (c) term savings certificates issued by a treasury branch under The Treasury Branches Act and assigned as to principal to the Minister.

(Extract from *The Alberta Gazette*, December 31, 1968)

GOVERNMENT OF THE PROVINCE OF ALBERTA

ALBERTA REGULATION 342/62

BITUMINOUS SANDS REGULATIONS

under

THE MINES AND MINERALS ACT, 1962

(O.C. 891/62)

(Filed June 15, 1962)

1. These regulations may be cited as the "Bituminous Sands Regulations, 1962".
2. In these regulations,
 - (a) "bituminous sands" and "bituminous sands rights" have the meaning given in The Mines and Minerals Act, 1962;
 - (b) "Department" means the Department of Mines and Minerals;
 - (c) "Director" means the Director of Minerals;
 - (d) "lease" means a bituminous sands lease;
 - (e) "Minister" means the Minister of Mines and Minerals;
 - (f) "permit" means a bituminous sands prospecting permit.

Permits

3. (1) An application for a permit shall be filed at the office of the Director and may be granted subject to the provisions of these regulations.
 - (2) An application under subsection (1) shall be made
 - (a) in person where the applicant is a natural person, or
 - (b) by an agent in person where the applicant is a corporation.
4. (1) An application for a permit shall be accompanied by
 - (a) a fee of \$250.00,
 - (b) the rental for one year at five cents an acre, and
 - (c) a deposit of \$50,000.00.
 - (2) The deposit may be in the form of
 - (a) cash,
 - (b) negotiable bearer bonds of the Government of Canada or the Province of Alberta,
 - (c) negotiable bearer bonds guaranteed as to principal and interest by the Province of Alberta,
 - (d) savings certificates issued under The Savings Certificates Act, or
 - (e) term savings certificates issued by a treasury branch under The Treasury Branches Act and assigned as to principal to the Minister.
 - (3) The fee, rental and deposit shall be refunded if the granting of the permit is refused.
 - (4) The deposit shall be held by the Department as a guarantee that the examination will be carried out in accordance with these regulations.
 - (5) The deposit shall be forfeited to the Crown if during the currency of the permit an examination satisfactory to the Minister was not made in accordance with the plan of examination.
5. The maximum area of a permit shall be 50,000 acres and its boundaries shall be in the discretion of the Minister

6. The proposed plan of examination to be conducted shall be included in the application and if the proposed plan is approved by the Minister a permit may be granted.

7. The permit shall be in such form as may be determined by the Minister and may include such terms and conditions as the Minister may prescribe.

8. (1) The permittee is prohibited from transferring a part of the location contained in the permit.

(2) Subject to subsection (1) the permittee may transfer the permit to the extent permitted under The Mines and Minerals Act, 1962.

9. (1) A permit conveys the right to search for, mine, quarry, work and remove bituminous sands in lands contained in the permit and to extract products therefrom in an amount necessary for the permittee to carry out proper tests of the bituminous sands, but subject to any exceptions expressed in the permit.

(2) The permittee shall not dispose of bituminous sands or products recovered therefrom without the consent in writing of the Minister.

10. (1) The term of a permit shall be one year from the date of the permit, renewable for a second term of one year upon payment of rental for the second year at the rate of ten cents an acre and renewable for a third term of one year upon payment of rental for the third year at the rate of ten cents an acre.

(2) With each application for renewal the permittee shall supply a report on the progress of the examination carried out together with an estimate of the cost thereof and particulars of the extent and nature of the work to be conducted during the next term.

11. The plan of examination as approved may not be subsequently varied in any way without the consent of the Minister.

12. The permittee shall furnish to the Minister or to his authorized representative a complete copy of every log taken of each hole drilled and such other information, data and reports pertaining to the examination as the Minister may from time to time require.

13. Upon the termination of a permit, the permittee shall furnish to the Director a statutory declaration setting forth the several items of expenditure incurred in the examination and the specific purpose for which each item was expended.

14. A permittee may surrender at any time, or from time to time, any part of the lands contained in the permit.

15. A permit may be terminated at any time at the option of the permittee, and if he has complied with these regulations he shall have the exclusive right to apply for a lease of bituminous sands rights in lands contained in the permit.

16. If a permittee does not make application for a lease and has complied with the terms and conditions of the permit to the satisfaction of the Minister, the deposit will be refunded.

17. The permittee shall comply with the provisions of The Mines and Minerals Act, 1962, The Quarries Regulation Act and The Oil and Gas Conservation Act, and with the provisions of any regulations now made or that at any time hereafter may be made under any of the said Acts.

18. In the event of failure to comply with any of the terms or conditions of the permit, the Minister shall cause written notice to be mailed to the permittee indicating that the permit may be cancelled unless within thirty days after the date of the notice the permittee remedies the default to the satisfaction of the Minister.

Leases

19. The lands that may be acquired under lease shall be determined by the Minister after consultation with the permittee and after taking into consideration the extent and nature of the bituminous sands proven by the permittee's examination, the proposed capacity of the plant or other works to be constructed and the requirements for operation thereof for a period of at least thirty years.

20. A lease grants the bituminous sands rights in the location, but subject to any exceptions expressed in the lease.

21. (1) A lease shall require that, within one year from the date upon which the lessee is given notice by the Minister to do so, the lessee shall commence the construction of the plant or other works, and shall complete the plant or other works and place the same in operation within four years from the date of the notice by the Minister, and thereafter shall carry on the processing of the bituminous sands or extraction of products diligently and continuously to the satisfaction of the Minister.

(2) The notice by the Minister shall not be given until the expiration of at least one year from the date of the lease.

22. A lease shall bear the date of issue but the term of the lease shall commence on the date the application was made.

23. The term of a lease shall be twenty-one years, renewable for further terms each of twenty-one years so long as the plant or other works are in operation, subject in each case of renewal to the terms and conditions prescribed at the time the renewal is granted, and to the provisions of The Mines and Minerals Act, 1962 and the regulations.

24. A lease shall be in such form as may be determined by the Minister and may include such terms and conditions as the Minister may prescribe.

25. The annual rental of a lease, payable yearly in advance, shall be
(a) twenty-five cents an acre for the first five years of the term of the lease, and

(b) one dollar an acre for the balance of the term and any renewal thereof but the Minister, in his sole discretion, may reduce to twenty-five cents an acre the rental payable in any year until the location is in production.

26. (1) The deposit for a lease shall be \$5.00 for each acre contained in the lease but in no case shall the maximum deposit exceed \$50,000.00 or the minimum be less than \$10,000.00.

(2) Where application for lease is made at the termination of a permit any deposit in excess of the deposit required for the lease shall be refunded.

(3) Upon the completion of the construction of the plant or other works satisfactory to the Minister, the deposit shall be refunded.

27. The lessee or his agent authorized in writing shall, not later than the twenty-fifth day of the month, file with the Department, on

forms prescribed by the Minister, a full report of the production, disposition and sales during the preceding month.

28. (1) The lessee may surrender his lease at any time or with the consent of the Minister may surrender at any time or from time to time any part of the lands contained in the lease.

(2) Upon surrender of a lease, the deposit shall be refunded if the lessee has complied with the terms and conditions of the lease.

29. (1) The lessee is prohibited from transferring a part of the location contained in the lease unless the consent of the Minister is first obtained.

(2) Subject to subsection (1) the lessee may transfer the lease to the extent permitted under The Mines and Minerals Act, 1962.

General

30. Where application is made for a lease without first having obtained a permit the Minister may grant the lease subject to these regulations as far as practicable.

31. The Minister from time to time may make such orders as he may deem necessary for the effective administration of these regulations, and where any question arises pertaining to the interpretation or application of these regulations the Minister shall be the sole judge and there shall be no appeal from his decision.

32. These regulations apply to all bituminous sands prospecting permits and bituminous sands leases granted before the coming into force of these regulations.

33. Regulations Governing Disposition of Bituminous Sands Rights the Property of the Crown, filed as Alberta Regulation 333/57, are hereby repealed.

